

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

LAVVAN, INC.,

Plaintiff,

v.

AMYRIS, INC.,

Defendant.

No. \_\_\_\_\_

**JURY TRIAL DEMANDED**

**COMPLAINT**

LAVVAN, Inc. (“Lavvan”), brings this action against Amyris, Inc. (“Amyris”).

**I. INTRODUCTION**

“Not one partner has ever stood with us and said, *We’re only going to do what the contract says*. . . . if that ever happened, we would be out of business today . . . .”

– Amyris CEO John Melo

1. This case seeks to remedy the predictable consequences that stem from a business partner’s view that it need not concern itself with the terms of the agreement it entered, and from that partner’s deliberate decision to misappropriate valuable intellectual property entrusted to it under that agreement for its own gain.

2. In 2019, Amyris addressed its short-term woes by publicly announcing that it would be entering a new industry by forming a promising exclusive partnership with Lavvan and securing from Lavvan a much-needed multi-million-dollar cash influx. Amyris then quickly proceeded to denounce the deal’s terms privately and to try to change and frustrate—and ultimately to breach—those terms, all at the expense of Lavvan and its investors. In fact, Amyris has rejected the agreement’s most fundamental terms so thoroughly that Amyris evidently never meant to honor the contract at all. In the course of repudiating the agreement, Amyris

misappropriated Lavvan's trade secrets and used intellectual property licensed exclusively to Lavvan to compete against, rather than collaborate with, its supposed partner.

3. Amyris apparently saw the contract as a short-term fix for its deep and dire financial troubles—as Amyris's CEO would come to describe it, the deal was a decision for Amyris to 'cut off its arm to save its body.' The news of Amyris's potentially lucrative partnership with Lavvan, in a rapidly growing and extremely attractive industry (biosynthetic cannabinoids), would stave off investors' worries about the company's hundreds of millions of dollars in losses, crushing debt load, and languishing stock price. But to get the deal it wanted to announce, Amyris had to agree to give Lavvan exclusive rights to valuable intellectual property, as well as control over decisions about how and when the partnership would commercialize its collaborative research and development.

4. As Lavvan came to learn, ceding such control threatens to expose the rotten core of Amyris's business, which has long depended on accounting schemes designed to hide massive manufacturing losses Amyris quietly absorbs in the development of its products. These schemes allow Amyris to portray itself as a leading player in the field of biotechnology, even while its financials tell a very different story of a company that cannot seem to turn a profit.

5. Accordingly, after having secured the benefits of Lavvan's upfront \$10 million payment and the positive stock-market effects of announcing its partnership, Amyris now hopes to ignore its contractual obligations, seize for itself Lavvan's rights, and usurp for itself all of the benefits of the partnership—in flagrant violation of Lavvan's intellectual property rights and the Parties' operative agreement.

6. All the while, Amyris continues to feed the market—and its auditors and bankers—false and misleading information about the status of the partnership, its obligations and

limitations under the partnership, and the scope of the Parties' intellectual property rights, desperate to pump its stock price by maintaining a false appearance of progress. Amyris's CEO has admitted that his habit of over-promising is "like an addiction" and "something he could not control."

7. Amyris's flagrant violations of the fundamental terms of its agreement now extend to the infringement of patents over which Lavvan holds exclusive licenses, as well as the appropriation of Lavvan's trade secrets. Amyris's conduct has left Lavvan with no choice but to seek this Court's intervention to remedy the significant damage Lavvan and its investors have suffered.

## **II. CASE OVERVIEW**

8. In March 2019, Lavvan and Amyris entered into a Research, Collaboration and License Agreement (with its subsequent written amendments as of May 20, 2019, and March 11, 2020, the "RCL Agreement") to biosynthetically develop rare chemicals found in cannabis plants, known as cannabinoids, for commercial use.<sup>1</sup> The RCL Agreement provided Amyris with the ability to earn \$300 million in milestone payments over several years as well as a profit-sharing arrangement based on Lavvan's commercial sales of these biosynthetic cannabinoids. The RCL Agreement provided the framework to leverage Amyris's intellectual property and infrastructure to position Lavvan as a dominant first-to-market and lowest-cost producer of biosynthetic cannabinoids in an anticipated multi-billion dollar industry.

9. The division of labor under the RCL Agreement was straightforward: Amyris would develop for Lavvan yeast strains specifically engineered to produce a series of cannabinoids through fermentation, and Lavvan would have the exclusive right to then use those

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<sup>1</sup> A true and correct copy of the RCL Agreement is appended to this Complaint as Exhibit A.

yeast strains to manufacture and commercialize the cannabinoids, as well as an exclusive license to all of Amyris’s intellectual property reasonably necessary to develop or produce those cannabinoids. In exchange, Lavvan agreed to pay Amyris hundreds of millions of dollars in milestone and profit-sharing payments, in addition to the \$10 million initial influx of cash Lavvan paid Amyris at the outset of their partnership. Specifically, Lavvan would pay Amyris incremental “milestone payments” as Amyris reached defined developmental goals that bring the cannabinoids closer to economical commercialization, as well as royalty payments based on Lavvan’s commercial sales of those cannabinoids.<sup>2</sup>

10. Lavvan and Amyris (the “Parties”) were thus embarking on a venture that would disrupt the current cannabis industry, and they were poised to be the frontrunning market leaders to fill the rapidly developing and high demand for these biosynthetic cannabinoids in a variety of markets, including health, beauty and cosmetics, food and beverage, and pharmaceuticals. Amyris announced the collaboration in February 2019 to great fanfare—and a 70% jump in its stock price, adding hundreds of millions of dollars to its market capitalization. This introductory announcement would prove to be the high point of the collaboration.

11. Lavvan has more than held up its end of the deal. After signing the RCL Agreement, Lavvan provided Amyris an upfront payment of \$10 million. Lavvan also identified an array of prospective applications, markets, and customers, including developmental targets for profitable commercialization of cannabinoids based on market conditions, and proceeded to assemble a world-class team, including a group that had just built a \$2.5 billion cannabis business that was acquired in the largest deal of its kind in the industry’s history. And as Amyris

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<sup>2</sup> For ease of exposition, references in this Complaint to “delivering CBD” or “delivering cannabinoids” refer to delivering the strain, production process, and associated IP needed to produce that cannabinoid (unless the context indicates otherwise).

reported (falsely, Lavvan later learned) that it was on schedule for its contracted developmental milestones, Lavvan conducted an exhaustive search throughout the United States and Canada for an appropriate fermentation facility to prepare to produce the biosynthetic cannabinoids from the yeast strains Amyris was supposed to deliver, and Lavvan ultimately spent hundreds of thousands of dollars contracting with a third-party manufacturer (the “Selected Manufacturer”) for the initial engineering work in advance of full-scale manufacturing.<sup>3</sup>

12. Amyris had other plans, however, and did not come close to holding up its end of the deal. It has yet to reach even the first contractual developmental milestone in the RCL Agreement, despite its repeated false and misleading statements to Lavvan and to the public markets that Amyris was close to achieving some of those milestones many months ago. Among those unfulfilled promises, in December 2019, Amyris told Lavvan it would meet the first milestone by February 2020 “unless the lab burns down.” Amyris’s lab is still standing, yet half a year after that promised date, Amyris still has not met the milestone. As a practical matter, Amyris has quit complying with the RCL Agreement and gone in a very different direction.

13. In fact, just months after the Parties had entered into the RCL Agreement, Amyris CEO John Melo told Lavvan that Amyris had “seller’s remorse.” Historically, Amyris had entered into partnerships in which it retained control over decisions about manufacturing and commercialization. Lavvan deliberately negotiated a very different deal, and secured the exclusive license to the intellectual property necessary to manufacture and commercialize the relevant products, and control over those processes, as reflected in the RCL Agreement.

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<sup>3</sup> Lavvan and the Selected Manufacturer entered into a Non-Disclosure Agreement under which the parties’ relationship is confidential. To comply with that agreement, this Complaint uses the term “Selected Manufacturer” to identify the third-party manufacturer Lavvan selected.

14. Without control over manufacturing and commercialization, Amyris would be unable to implement its favored financial engineering tool: rushing an unprofitable product to market when it felt it needed to boost its stock price with a public announcement, and obscuring the unprofitability of the product through creative accounting such as reallocating manufacturing costs to hide uneconomical production costs. As Amyris remarkably admitted to Lavvan in recent months, Amyris routinely launches unprofitable products—attempting to benefit from an anticipated boost to its stock price and saving the question of how to manufacture those products at a rational economic price for another day.

15. Amyris agreed to cede control over manufacturing and commercialization because, when it negotiated the RCL Agreement, it desperately needed the cash influx Lavvan offered in the form of an upfront \$10 million payment, the anticipated cash flows from Lavvan’s milestone payments, and the stock-price boost from announcing its entry into the hot, new biosynthetic cannabinoid space. To obtain those benefits, Amyris agreed to Lavvan’s proposed partnership, under which Amyris would leverage its development expertise to create a technology package for Lavvan, and Lavvan would control the implementation of technology via manufacturing and commercialization of the cannabinoids. Indeed, in a meeting with Lavvan CEO Neil Closner, Amyris CEO Melo likened Amyris’s decision to enter the RCL Agreement and partner with Lavvan on biosynthetic cannabinoids to ‘cutting off the arm to save the body’: Amyris needed to agree to create biosynthetic cannabinoids for Lavvan and cede control over commercialization and manufacturing to Lavvan in order to get Lavvan’s cash and partnership to “save the body” of the company—as Amyris wanted the press release about its partnership with Lavvan and entry into this space to pump its stock price and facilitate much-needed efforts to raise capital. This behavior is emblematic of Amyris’s apparent corporate ethos under the

“leadership” of CEO John Melo—do whatever it takes to boost the stock price today, even if that means trouble down the road. Indeed, this is a sufficiently regular behavioral pattern for Amyris that Melo actually admitted to Lavvan CEO Neil Closner in a December 2019 meeting that Melo was “exhausted” from constantly having to do what it takes to keep his company’s stock price afloat.

16. Lavvan demanded control over manufacturing in order to promise its expected large-scale corporate customers the stable supply chain necessary for mass production. Lavvan could not entrust Amyris with manufacturing for several reasons, including because of Amyris’s precarious financial situation. Moreover, Amyris did not have familiarity with the cannabis industry. Lavvan, in contrast, had significant familiarity with that field, including with respect to commercialization opportunities. By entering into the RCL Agreement, Lavvan sought to exploit those significant opportunities it had identified.

17. When it entered into the RCL Agreement, in fact, Amyris was teetering on the edge of insolvency, in part a result of its apparent history of pushing out unprofitable products. Amyris’s 2018 10-K (filed nearly six months late in *October* 2019) admitted that the company had a “material weakness” in its “internal control over financial reporting,” causing repeated delays and restatements. In fact, for at least seven consecutive years, Amyris was unable to submit its 10-K on time, subjecting it to, among other things, NASDAQ’s delisting procedures. More critically, Amyris acknowledged: “We have incurred losses to date, anticipate continuing to incur losses in the future, and may never achieve or sustain profitability.” As of December 31, 2018, Amyris “had a negative working capital of \$119.5 million and accumulated deficit of \$1.5 billion.” Amyris admitted the need for cash, because its cash and cash equivalents would “not be sufficient to fund expected future negative cash flows” beyond September 30, 2020.

Amyris had lost over \$200 million in 2018, and in 2019, while generating over \$150 million in revenue, it ended up incurring losses of over \$240 million.

18. Given the likelihood that handing Lavvan control over manufacturing and commercialization would expose Amyris's flawed business model, Amyris likely never intended to honor the RCL Agreement. Once Amyris was flush with Lavvan's investment and enjoying the momentum from announcing to the market its entry into the trendy cannabinoids space through its partnership with Lavvan, Amyris sought to change the deal. Amyris CEO Melo and other Amyris executives began clamoring for control of manufacturing, insisting on fundamentally altering the agreed-upon economic arrangement and even demanding advance payment of unearned milestone amounts. At the same time, Amyris pressured Lavvan to cooperate in its efforts (i) to persuade Amyris's auditors to aggressively recognize future revenue and (ii) to misstate to Amyris's bankers (who would go on to announce a \$200 million equity financing a few weeks later) the activity levels of certain of the development programs. When Lavvan would not capitulate to Amyris's demands, Amyris retaliated by morphing from Lavvan's partner to its competitor. In fact, Amyris COO Eduardo Alvarez told Lavvan's president Etan Bendheim that Amyris has no qualms about ripping up its agreements if it determines that they no longer 'work' for Amyris.

19. Amyris CEO Melo began by threatening that—notwithstanding the Parties' clear agreement, which was fundamental to their partnership, that Amyris would not be permitted to commercialize cannabinoids on its own—Amyris would take the position that it *could* commercialize cannabinoids *without Lavvan* under the RCL Agreement. That is, despite the contract's express terms to the contrary, Amyris contended that it could reap all the benefits of having partnered with Lavvan—including not only Lavvan's cash payment but also the expertise



and insight Lavvan had provided about the market and regulatory environment—and then abandon its contractual commitments to Lavvan, and steal for itself the yeast strains and molecules Amyris was developing for Lavvan under the RCL Agreement, while leveraging the funding provided to it by Lavvan.

20. Soon enough, Amyris began following through on those threats. Amyris sent product samples to third parties and committed both privately and publicly to manufacturing cannabinoids in 2020. This misconduct is antithetical to the entire purpose of the relationship embodied in the RCL Agreement, in which Amyris promised that it “ [REDACTED] [REDACTED] ” the relevant intellectual property “ [REDACTED] [REDACTED] ,” other than for Lavvan. Despite Lavvan’s requests, Amyris has not provided any valid explanation or justification for how such conduct complies with the RCL Agreement.

21. In addition to eroding irrevocably Lavvan’s trust in Amyris as a partner, Amyris’s actions have fatally undermined Lavvan’s ability to get in front of the market and demonstrably hurt Lavvan’s reputation. Amyris’s public comments about its intent to produce without Lavvan because of non-existent carveouts have harmed Lavvan’s credibility with investors, prospective customers, and the public at large. In private, to investors, Lavvan had obviously been promoting the exclusivity of the RCL Agreement. In public, Amyris is capturing all the goodwill associated with working on the cutting-edge of the field without giving Lavvan its due. And as a practical matter, Amyris’s slow development of the cannabinoids has eroded the head start that Lavvan hoped to leverage by partnering with Amyris.

22. Seeking to justify its retaliatory misconduct, Amyris initiated a campaign of pretextual concerns about Lavvan’s ability to make future milestone payments. Lavvan has never missed a milestone payment or suggested it would be unable to make one. In fact, during

contract negotiations, Amyris asked Lavvan to disclose its funding sources, and Lavvan declined and explained that like a typical newly formed company, Lavvan was poised to raise additional funding as the project progressed and milestones were hit. In response, Amyris did not insist on any such disclosures, and the final RCL Agreement does not include any specific representations or warranties about Lavvan's finances or ability to pay beyond providing proof of its ability to make the initial \$10 million payment. Amyris also publicly touted the hundreds of millions of dollars it expected to receive from Lavvan, which it characterized as its "well-capitalized partner." In laying the groundwork for its own non-performance, breach, and misappropriation of Lavvan's intellectual property, however, Amyris suddenly purported to be concerned about Lavvan's ability to make future milestone payments (notwithstanding that Amyris never achieved any milestones under the RCL Agreement). This was pure misdirection.

23. Notwithstanding this turmoil, Amyris has studiously avoided making public statements exposing the extent of troubles in its collaboration with Lavvan. The reality, however, is that Amyris's tactics have, predictably, destroyed the Parties' working relationship. Lavvan is not receiving the benefits of its investment and is losing out on its ability to enter this market as a leader. Meanwhile, Amyris has been trying to extract additional money from Lavvan while using Lavvan's cash and industry expertise to independently commercialize cannabinoids manufactured from the cannabinoid-producing yeast strains it made for Lavvan, violating the RCL Agreement and Lavvan's intellectual property rights. Amyris has been using its internal cannabinoid dedicated resources (paid for by Lavvan's \$10 million) to pursue its own competitive entry into the market while falsely claiming that it continues to work toward the objectives laid out in the RCL Agreement.

24. Lavvan has attempted to resolve these differences. It has raised its serious concerns about Amyris's conduct through emails, calls, and formal letters. In a letter dated April 22, 2020, after many failed attempts to remedy Amyris's misconduct, Lavvan explained that Amyris's actions would require Lavvan to seek termination of the RCL Agreement. But in its response, Amyris simply ignored Lavvan's serious grievances. Indeed, in the face of allegations that it has materially breached the RCL Agreement, Amyris has continued to reject the fundamental terms of that agreement: that Amyris develops cannabinoid-producing yeast strains for Lavvan, so that Lavvan can then manufacture and commercialize biosynthetic cannabinoids.

25. On May 11, 2020, Lavvan notified Amyris of its intent to terminate the RCL Agreement due to Amyris's repeated material breaches.

### **III. PARTIES**

26. Plaintiff, Lavvan, is a Delaware corporation with its principal place of business in New York, New York, and offices in Toronto, Ontario. Incorporated in 2019, Lavvan was formed to commercialize high-quality cannabinoid ingredients for a range of industries, including health, beauty and cosmetics, food and beverage, and pharmaceuticals.

27. Defendant, Amyris, is a Delaware corporation with its principal place of business in Emeryville, California. Amyris is a publicly traded biotechnology company that produces, among other things, ingredients for cosmetics, flavors, and fragrances.

### **IV. JURISDICTION AND VENUE**

28. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338.

29. Pursuant to 28 U.S.C. § 1391, venue is proper in this District because a substantial part of the events or omissions giving rise to Lavvan's claims occurred, and a substantial part of property that is the subject of this action is situated, in this District. Moreover, pursuant to

Section 16 of the RCL Agreement—which provides that “[a]ny dispute arising out of this Agreement shall be submitted exclusively to any state or Federal court located in New York County, New York”—Amyris has agreed to litigate in this District. Thus, Amyris has waived the application of 28 U.S.C. § 1400(b).

30. The RCL Agreement also has a dispute resolution clause that requires all IP-related disputes to be litigated in court. Section 7.2.1 provides: “In the event that a dispute arises with respect to the scope, ownership, validity, enforceability, revocation or infringement of any Intellectual Property, and such dispute cannot be resolved by the management of both Parties in accordance with Section 3.2.4, unless otherwise agreed by the Parties in writing, such dispute will not be submitted to arbitration and either Party may initiate litigation solely in a court or other tribunal of competent jurisdiction in the country of issuance, registration, application or other protection, as applicable, of the item of Intellectual Property that is the subject of the dispute.”<sup>4</sup>

31. This Court has personal jurisdiction over Amyris because, as noted above, Amyris has agreed to litigate in this District.

## **V. FACTUAL ALLEGATIONS**

### **A. Cannabinoid Production**

32. Cannabinoids are chemicals found in cannabis plants. There are over 100 known cannabinoids. The two most commercialized cannabinoids today are THC (tetrahydrocannabinol), which produces a psychoactive effect, and CBD (cannabidiol), which has no intoxicating elements and is rapidly growing in popularity. THC and CBD are together

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<sup>4</sup> In contrast, the Parties agreed that contract-related disputes “will be finally settled under the Rules of Arbitration of the International Chamber of Commerce (the ‘ICC Rules’)” under Section 7.2. Accordingly, on August 22, 2020, Lavvan commenced an arbitration against Amyris asserting the contract and related claims that are subject to that provision.

known as “major” cannabinoids. Cannabis plants also contain numerous other cannabinoids, called “minor” cannabinoids. Due to the low levels of certain minor cannabinoids in the cannabis plant, production of these rarer, minor cannabinoids through traditional cultivation can be extremely costly or even completely uneconomic.

33. In recent years, demand for cannabinoids has skyrocketed. Several states, and even the federal government with the passage of the Improvement Act of 2018, Public Law No. 115-334, 132 Stat 4490 2018 (the “Farm Bill”), have decriminalized and legitimized cannabis cultivation, typically by distinguishing between “marijuana” and “hemp.” Companies are still researching the many prospective applications of and uses for cannabis crops and the cannabinoids found in those crops.

34. The traditional way to produce cannabinoids is to grow cannabis plants, harvest them, and extract the compounds from the plants. Several companies are engaged in this work across the country. That approach, however, carries many risks. For one, a hemp crop grown to produce CBD that has too much THC may be considered marijuana in certain jurisdictions, and not harvestable. In addition, real-world farming conditions create impediments to commercial scalability. Difficulties ensuring crop consistency, purity, and cycle time pose significant challenges to creating a dependable supply chain to service large product markets such as health, beauty and cosmetics, food and beverage, and pharmaceuticals. Moreover, traditional cannabis-plant cultivation does not yield the rarer minor cannabinoids on a sufficiently large scale or economically viable basis.

35. If a company could skip plant cultivation and the subsequent extraction process entirely, however, and instead produce cannabinoids in a lab at defined, precise purity levels and with predictable consistency, reliability, repeatability, and at a fraction of the cycle time, such

biosynthetic cannabinoids could help meet existing demand and usher in significant additional future domestic and international demand. This was precisely the plan Lavvan conceived when it approached Amyris to discuss a potential venture, and precisely what Lavvan sought to do by entering into the RCL Agreement.

36. Many potential large-scale purchasers of cannabinoids—for example, pharmaceutical, cosmetic, food, or beverage companies—need cannabinoids that are consistent in quality and available at sufficiently large scale from a reliable supply chain. Biosynthetic cannabinoids can uniquely meet those criteria, ushering in vast new commercial possibilities for large-scale corporate customers. Large, traditional companies incorporating cannabinoids into new and existing products would represent a transformational shift in the cannabis industry. Such companies bring unmatched expertise and resources in the areas of product development, branding, distribution, and marketing, thus enabling them to immediately become major forces in the growing cannabinoid market as they launch products that include cannabinoids. Lavvan has had productive meetings with multiple Fortune 500 companies that have already begun developing products with cannabinoids and/or expressed a strong desire to incorporate both major and minor cannabinoids into their products, and are interested in biosynthetically produced cannabinoids because of their product quality, reliability, and economics at scale. Indeed, Lavvan has a number of pending sample requests from these industry leaders that it has been unable to fulfill because Amyris misrepresented its timing and capabilities and could not deliver the samples by Q1 2020 as required.

37. The demand for cannabinoids is significant and expected to grow. CBD, one of the only cannabinoids harvestable at scale from hemp plants, has already achieved widespread use, including to treat neurological issues and pain. Other cannabinoids (such as CBG, CBC, and

CBN) may provide additional benefits that cause them to become as popular or even more popular than CBD. Because minor cannabinoids have not been commercially available before (again, because they exist in such low concentration levels in nature), researchers are only now beginning to understand their full potential. For example, certain minor cannabinoids have antimicrobial uses; others appear to be promising treatments for acne. Each of those uses, by itself, would be multi-billion-dollar markets.

38. Considering this potential, analysts have estimated that the global market for cannabinoid biosynthesis will increase from \$7.5 billion in 2025 to over \$80 billion by 2040, with an estimated present value of approximately \$30 billion. The first company to commercialize biosynthetic cannabinoids at scale has the opportunity to capture this lucrative market and to make a lasting impression with customers as a market-leading producer of innovative and safe products with significant health benefits.

39. Lavvan saw this opportunity and identified Amyris as a potential collaborator with the technology to produce cannabinoids that could be commercialized for a wide variety of uses. Amyris is a biotechnology company that uses yeast fermentation to produce certain molecules. At a high level, the fermentation process is similar to brewing beer. But Amyris's core expertise is in genetically modifying yeast strains so that instead of beer, they produce specific target compounds through fermentation. Once Amyris has developed a strain of yeast that is sufficiently effective at producing the target molecule, the strains and related production process can be deployed in large fermentation tanks (again, not dissimilar from beer tanks), and that fermentation process produces the molecules.

40. Amyris is not the only company in this space. For example, Ginkgo Bioworks ("Ginkgo"), a bioengineering competitor to Amyris, has partnered with Cronos Group

(“Cronos”) to produce cannabinoids using fermentation. In this partnership Ginkgo plays a similar role to Amyris and Cronos plays a similar role to Lavvan. Investment-banking equity-research analysts at Raymond James have recently confirmed the estimated value of that partnership to Cronos to be approximately \$1.5 billion, given the anticipated market size and Cronos’ expected 5% share of that market.

41. By beating Ginkgo and Cronos to market, Lavvan could secure an even higher market share—and an even higher value. For example, research from McKinsey & Company indicates that, in the pharmaceutical sector, the first firm to market obtains, in the long-run, a 6% market-share advantage over later entrants.<sup>5</sup> If Lavvan’s market share exceeded Cronos Group’s by six percentage points, then the analysts’ estimates imply that Lavvan’s market value would exceed \$3 billion.

#### **B. Lavvan Reaches Out to Amyris**

42. In late 2018, members of Lavvan’s founding team initiated discussions with Amyris about a collaboration to develop and commercialize cannabinoids. Lavvan was familiar with fermentation-based production of molecules and had the vision of using that process to develop cannabinoids. Lavvan wanted to be the first to commercialize such cannabinoids.

43. Amyris was a natural choice as a collaborator. Amyris was known as a long-time industry leader in developing unique yeast strains and fermenting molecules at a commercial scale and had fitting infrastructure: Amyris had spent \$1 billion developing a platform that Lavvan believed it could leverage to develop cannabinoids. Amyris had over 250 patents in fermentation and related technologies, with more than 500 others in development, and an unparalleled “strain library”—an extensive library of information regarding different yeast

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<sup>5</sup> Available at <https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/pharmas-first-to-market-advantage#>.



strains it can use to develop new molecules faster. Lavvan believed that these and other features of Amyris's development platform gave it an important head start in the development process and an ability to continue work at a significantly faster pace than its competitors.

44. Despite its scale and unique technology, Amyris had not pursued cannabinoid production prior to its involvement with Lavvan. This was likely due in part to Amyris's lack of familiarity with the cannabis industry and in part to a cloudy regulatory environment that became clearer and more permissive after the passage of the Farm Bill in late 2018. The Farm Bill changed the definition of illegal marijuana and legalized production of hemp and hemp-derived products such as CBD.

45. Although Amyris lacked experience with cannabinoids, Lavvan saw strong benefits to the collaboration it had envisioned and proposed. Lavvan believed that Amyris's experience and technological head start would enable Lavvan to bring the first biosynthetic cannabinoids to market at scale and reap significant profits. Fermentation-based production of cannabinoids involves a chain of metabolic steps. First, raw inputs are converted into a series of intermediate molecules. Next, the intermediate molecules are further converted into the targeted cannabinoid. In connection with previous projects, Amyris had developed advanced technology to produce with exceptional efficiency certain intermediate molecules that are also critical in the biosynthetic production of cannabinoids. By way of analogy, Amyris's advantage was akin to it having modern industrial techniques to produce flour while the rest of the world still used hand threshing techniques.

46. Lavvan further believed Amyris had the resources to develop the yeast strains that would yield biosynthetic cannabinoids at a market-leading scale, cost, pace, purity, and consistency. In contrast, competitors seeking to enter this space would be hard-pressed to beat

Lavvan to market, given the head start Amyris's existing infrastructure, capabilities, and experience provided. Competitors would face the added challenge of developing biosynthetic cannabinoids using yeast-based fermentation without infringing on Amyris's numerous patents.

47. In December 2018, Lavvan and Amyris began negotiating a collaboration in which Lavvan would pay Amyris to develop yeast strains and associated technology to be used in large-scale fermentation to produce cannabinoids at scale. Lavvan would control the manufacturing and commercialization process and would pay Amyris prescribed milestone payments and royalties on Lavvan's sales of these cannabinoids. Moreover, Lavvan would receive an exclusive license (even as to Amyris) to Amyris's intellectual property relating to such development, manufacturing, and commercialization.

48. Critically, Lavvan's control would enable it to decide when and how to move from the lab phase to the large-scale commercial manufacturing phase, and when the licensed intellectual property should be exploited commercially. The RCL Agreement sets the parameters Amyris must achieve to reach any given milestone. Key criteria included [REDACTED]  
[REDACTED]  
[REDACTED]. Such parameters enabled Lavvan to monitor and determine when commercial production should begin and how quickly it should ramp up for any given cannabinoid—important decision points for aligning production with cost and sales to ensure commercial and economic viability. That is, the decision-making rights Lavvan negotiated and secured for itself—as well as the exclusive intellectual property licenses that Lavvan obtained from Amyris—were designed to ensure that Lavvan would determine when a cannabinoid molecule should be produced commercially. This was critical because a key challenge in producing a molecule like a cannabinoid through a biosynthetic process is doing so

reliably cheaper than what the product could sell for in the marketplace, while having sales contracts in place to justify initiating commercial production. Lavvan's rights ensured that it could wait until development had reached the point at which the cannabinoid could be sold on the market for prices that exceeded the cost of production and that there was sufficient demand in place to justify large-scale fermentation. Lavvan also had the right to select its manufacturing facilities and to control scaling.

49. Lavvan's rights to control manufacturing and commercialization were all the more important because Amyris was in a precarious financial position at that time. Amyris had lost over \$200 million in 2018, and had actually resorted to borrowing about \$1.2 million from its CFO Kathleen Valiasek around the time the Parties signed the RCL Agreement. This precarious financial position could affect Amyris's business judgment about when and how to manufacture and commercialize the cannabinoids in development. That is, as the recipient of large milestone payments under the RCL Agreement, Amyris had incentives to prematurely rush cannabinoids into commercialization. Lavvan's concerns in this regard have proven well-founded: Amyris has put heavy pressure on Lavvan to prematurely commercialize cannabinoids on an uneconomic basis.

50. Lavvan's rights to control manufacturing and commercialization were therefore central to the terms of the collaboration, and the Parties discussed those rights at length in the negotiations leading up to the execution of the RCL Agreement.

51. In its deals with other parties, Amyris's role typically included acting as the manufacturer. That was decidedly not the role Amyris would play in its collaborative venture with Lavvan. Ultimately, as discussed further below, Amyris reneged on its arrangement with Lavvan and its clear contractual commitment to impart to Lavvan control over manufacturing.

52. Following the execution of a term sheet in January 2019, Amyris immediately wanted to issue a press release touting the deal. As Lavvan came to learn, Amyris's insistence on pushing forward with press releases was reflective of its overall business model. Amyris and its CEO were "addicted" (their own word) to using the press to create interest in its stock to drive its stock price upward—allowing Amyris's perceived public-relations benefits to drive its business decisions. As Lavvan came to learn, Amyris measured success by stock-price reactions and market interest in its stock rather than the fundamental business metrics on which successful and profitable companies focus.

53. Consistent with that approach, and despite the many open issues, Amyris pushed forward with its press release, announcing on February 5, 2019, that it was "pleased to have been recognized by a well-capitalized partner as the company best suited to leverage fermentation-based technology in the production of the best quality and lowest cost and sustainably-produced cannabinoids." Amyris further stated in the press release that it stood to receive up to \$255 million in payments from its role in "development and scaling of technology to produce CBD," in the form of "an upfront payment" and further payouts "linked to milestones that are expected over the next 12-36 months."

54. Amyris achieved its desired result: In the single trading day following this press release, Amyris's stock price increased 74% from a closing price of \$3.16 on February 4 to a closing price of \$5.47 on February 5, well above its past-30-day peak of \$4.22.

55. Negotiation of the agreement continued on a quick pace because Amyris was eager to sign the deal by March 2019 and make a splashy announcement before the end of its fiscal quarter at the end of that month. Indeed, Amyris treated the end of the quarter as a deadline for finalizing the agreement—Amyris CEO John Melo and CFO Kathleen Valiasek told Lavvan

that, ‘if it’s not done by then, we’ll just do it ourselves.’ Amyris apparently knew that it needed something to distract the markets from what would be another abysmal quarter and year—Amyris’s results would again be, in Amyris CEO Melo’s words, “below expectations.”

56. Consistent with this need, Amyris publicly announced the execution of the RCL Agreement both through a press release and on a public conference call on March 18, 2019—*before* the Parties finalized the deal and signed the RCL Agreement the following day, and *on the same day that Amyris announced its disappointing financial results*. While Amyris was expressing time pressure to close the deal and agree to terms in the first quarter of 2019, it would claim to regret and wish to recant those agreed-upon terms only months later.

### **C. Research, Collaboration and License Agreement**

57. On March 19, 2019, Amyris and Lavvan executed the RCL Agreement. The contract obligated Amyris to develop yeast strains specifically engineered to produce a series of cannabinoids for Lavvan to manufacture and commercialize, and it obligated Lavvan to make milestone payments as Amyris achieved specified development goals. More specifically, Amyris’s core “deliverable” for each cannabinoid is a strain of yeast that is sufficiently good at producing the target cannabinoid, together with a production process and related know-how needed to deploy the strain for commercial production. This includes, for example, the process for extracting the target compound from the liquid fermentation broth.

58. The RCL Agreement and its annexes provided technical details about these goals, with the milestones divided into two main categories, lab-based milestones and large-scale commercial milestones. “[REDACTED],” [REDACTED]

[REDACTED],” [REDACTED]

[REDACTED]

[REDACTED].

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

60. And under the proposed project plan timeline to which the Parties agreed, [REDACTED]

[REDACTED]

[REDACTED]:

[REDACTED]

61. The RCL Agreement also assigns detailed rights and obligations among the Parties. Among others, the RCL Agreement provides Lavvan with two critical rights. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

62. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The exclusive nature of this license is highlighted by the structure of the SPE— [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The narrowness of these exceptions underscores the broad exclusivity the parties agreed to in favor of Lavvan.

63. [REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

64. Throughout negotiations, the Parties understood that the starting point of the RCL Agreement would be complete exclusivity for Lavvan for all licensed intellectual property for any uses related to cannabinoids. Just days before signing the RCL Agreement, however, Amyris told Lavvan that Amyris realized it had to limit the field in which Lavvan could commercialize cannabinoids because it had a longstanding, existing collaboration with [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

65. To accommodate this contractual restriction on Amyris's ability to license its IP to Lavvan, the Parties carved out a limited exception [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] In requesting and explaining its need for a [REDACTED] carve-out to avoid any breach of its obligations to [REDACTED], Amyris CFO Kathleen Valiassek confirmed in writing that "*Amyris does not have rights to this field either.*" This understanding is confirmed by the

RCL Agreement, which states that “[REDACTED]  
[REDACTED]  
[REDACTED]”

66. The Parties discussed and understood that the [REDACTED] carve-out does not limit Lavvan’s ability to use licensed IP to market cannabinoid ingredients to manufacturers of [REDACTED] or to manufacturers who also use [REDACTED] as ingredients; rather, [REDACTED]  
[REDACTED]. Other than ensuring that Amyris did not upset its existing obligations to [REDACTED], this was not a material restriction on Lavvan, as cannabinoids are known not to have any [REDACTED].

67. During negotiations, Amyris sought carveouts that would allow it to manufacture and market cannabinoids for [REDACTED], and to customers in the [REDACTED]  
[REDACTED]. For example, Amyris proposed to define a separate “[REDACTED]” and exclude [REDACTED] from the [REDACTED].

68. Lavvan wanted to ensure that its rights were not limited and that Amyris would not be permitted to manufacture or market cannabinoids or compete against Lavvan in any way. Lavvan therefore rejected these proposals, and in the end, Amyris did not receive these broad carveouts from Lavvan’s exclusive licenses.

69. Instead, to address Amyris’s requests relating to the [REDACTED] without interfering with the Parties’ clear agreement that manufacturing and commercialization were reserved for Lavvan alone, the Parties agreed [REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED].

70. Consistent with that arrangement, the RCL Agreement expressly anticipates that Lavvan may market ingredients to [REDACTED], providing that if [REDACTED]

[REDACTED]

[REDACTED].

71. To address Amyris's requests regarding [REDACTED], the RCL Agreement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. Critically,

however, to ensure that Amyris remained focused on first developing cannabinoids for Lavvan under the RCL Agreement, [REDACTED]

[REDACTED]

[REDACTED].

72. The RCL Agreement otherwise grants Lavvan an exclusive IP license and generally prohibits Amyris from commercializing cannabinoids without Lavvan. During the term of the RCL Agreement, "[REDACTED]"

[REDACTED]

[REDACTED]

[REDACTED]. Similarly, under

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

73. The only other (inapplicable) exception to this general prohibition [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

74. Lavvan has several key rights in the event of Amyris's material breach. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

75. In the RCL Agreement, Amyris also agreed to provide Lavvan a lien on [REDACTED]

[REDACTED]: "[REDACTED]"

[REDACTED]

[REDACTED]

76. The RCL Agreement also provides that the Parties are not permitted to disclose

[REDACTED]

[REDACTED]

#### **D. Lavvan's Upfront \$10 Million Payment**

77. Amyris's announcement of its collaboration with Lavvan and its association with the suddenly booming cannabis market brought instant financial benefits to Amyris. This was especially critical for Amyris, which had long been financially precarious. Amyris itself stated in its annual report for 2018: "We have incurred significant operating losses since our inception, and we expect to continue to incur losses and negative cash flows from operations for at least the next 12 months . . . ." 2018 Form 10-K. As of December 31, 2018, Amyris had "negative working capital of \$119.5 million and an accumulated deficit of \$1.5 billion." *Id.*

78. On March 18, 2019, Amyris issued a press release announcing it had "signed a final definitive agreement for cannabinoid development" with Lavvan. As described above, Amyris's announcement blatantly misrepresented the status of the RCL Agreement because in reality, at the time of the announcement, there were still material open items under discussion and neither Amyris nor Lavvan had executed the RCL Agreement.

79. The press release explained that the agreement contained "\$300 million of R&D and milestone payments plus long-term royalties," and that "Amyris believes it can earn a significant portion of these milestone payments by the end of 2020, with \$20-30 million anticipated in 2019, including a \$10 million milestone payment that is expected to be recognized later this month." This first \$10 million "milestone" payment was the same "upfront payment"

Amyris referenced in its previous press release and would not reflect payment for any new development work under the RCL Agreement.

80. In addition to its representations about the payments Amyris would receive, the March 18, 2019, press release also explained the division of labor between Amyris and Lavvan. It explained that Amyris would be responsible for “all R&D work” and that “Lavvan will be responsible for the global manufacture and commercialization of the cannabinoids.” On Amyris’s earnings call later that day, Amyris CEO Melo also confirmed that the collaboration’s “overall structure is for exclusivity”—as reflected in the terms and structure of the agreement and the intellectual property licenses provided to Lavvan.

81. Amyris had a strategic reason to rush the premature announcement of its deal with Lavvan: March 18, 2019, was also the day Amyris announced its disappointing preliminary Q4 and year-end performance after trading hours. Amyris’s revenue for the year was roughly half of what analysts expected (\$80 million instead of \$160 million), and its earnings per share were also far lower than expected (a loss of \$3.52 per share instead of the anticipated loss of \$2.46 per share). As Amyris CEO Melo admitted on the call, “Our financial results were far below our expectations.” Moreover, Amyris announced (with no warning to Lavvan) that it would, again, not be filing its 10-K on time. Nonetheless, buoyed by the announcement of its collaboration with Lavvan, Amyris’s stock price stayed afloat in the days that followed in the face of what otherwise were clearly devastatingly disappointing financial results, opening the following day at \$3.95, up 3% from its closing price on March 18, 2020, of \$3.81.

82. On March 29, 2019, Amyris issued its next press release regarding the collaboration, touting that “it has successfully delivered on its first milestone for its cannabinoid

partner,” thereby “earning” its “first payment of \$10 million, which is part of a \$300 million collaboration before future royalty payments.”

83. The RCL Agreement imposed certain conditions on Lavvan’s obligation to pay the \$10 million upfront payment. For example, Lavvan was not required to make any payment until Amyris had [REDACTED]

84. But Amyris demanded its first \$10 million “milestone” payment in April 2019 even though it recognized it had not fully satisfied the RCL Agreement’s [REDACTED] condition. When Lavvan’s then-CEO and current President Etan Bendheim asked Amyris CEO Melo in mid-April 2019 about the status of the [REDACTED], Melo offered no informative response, choosing only to berate him, stating, “Who are you?! You have no credibility with me or the board!” Amyris CFO Kathleen Valiasek paired Amyris’s demand for payment with a threat to stop the collaboration before it even started: Valiasek threatened that Amyris would sue Lavvan or ‘rip up’ the RCL Agreement if Lavvan did not make the premature payment.

85. Despite Amyris’s confrontational posture, and despite the fact that Amyris was not yet technically entitled to any payment under the RCL Agreement, Lavvan ultimately agreed to make a \$10 million payment to Amyris in light of Amyris’s threats and in the interest of maintaining the relationship.

86. True to its dependence on self-promotion, on May 20, 2019, Amyris issued a press release announcing that it received its “first cash payment of \$10 million” from “its cannabinoid partner, Lavvan,” for “having successfully delivered on its first major collaboration milestone as announced on March 29, 2019.”

**E. Lavvan Builds Its Expert Team, Further Enhancing the Value of What Amyris Was Receiving Under the RCL Agreement**

87. On August 8, 2019, Lavvan announced that it had successfully executed its plans to bring over a seasoned team of world-class professionals with extensive experience in the cannabis space. Neil Closner, who had experience at several successful startups and was the co-founder and former CEO of MedReleaf, would join as Lavvan's CEO. Joining Closner at Lavvan were seven other former senior executives from MedReleaf, who, together, were responsible for MedReleaf's groundbreaking achievements and success, and were each highly sought-after in the cannabis industry. Founded in 2013, MedReleaf grew to be Canada's most awarded licensed producer of cannabis and was widely recognized for its scientific leadership, product innovation, and operational excellence. MedReleaf was the first ISO 9001 and Good Manufacturing Practices (GMP) certified producer of cannabis in North America.<sup>6</sup> After completing the industry's largest initial public offering in June 2017, MedReleaf was acquired for \$2.5 billion in July 2018.

88. The MedReleaf team brought substantial expertise and tremendous credibility born from a highly successful company. MedReleaf had developed an extensive and detailed data collection and analytics program, and used data to develop insights for inventory management, new product development, and pricing. MedReleaf consistently maintained a significant share of the Canadian medical cannabis market.

89. The individuals that came over with Closner were also highly successful. An award-winning scientist, quality and supply chain experts, and successful entrepreneurs all came

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<sup>6</sup> ISO 9001 is an internationally recognized certification recognizing quality and environmental management systems as well as occupational health and safety management systems.



to Lavvan. And of course, the original Lavvan founding team included executives with deep experience in the pharmaceutical and financial industries.

90. The announcement of Closner and his team joining Lavvan conferred even more legitimacy on Lavvan and in turn benefitted Amyris in numerous ways. Most immediately, Amyris's stock jumped another 26% on the announcement. Amyris sought further market benefits from Lavvan's credibility during earnings calls, explaining, for example, that "[t]he Lavvan executive team is very experienced in delivering excellent insight and guidance," and has "a track record of leading the industry." Amyris further benefitted from Lavvan's strategic vision in the ensuing months. Especially after Closner and his team joined, Lavvan contributed market, scientific, industry, and regulatory knowledge of this new cannabinoid field—knowledge that Amyris completely lacked.

91. For example, Lavvan's new team members, using their extensive familiarity with the research and developments regarding cannabis, (i) shared genetic information about the compliment and activity of cannabinoid genes in the cannabis sativa plant; (ii) provided a list of cannabis varieties and non-cannabis species that can also produce cannabinoids; and (iii) illustrated the relationship between pH sensitivities and the tendency of CBDa to make small amounts of THCa, and the challenges that would pose to Amyris's yeast strains. On the production side, Lavvan shared detailed specifications for a cannabinoid isolate (i.e., the pure version of the molecule), as would be required for large consumer packaged-goods companies, based on Lavvan's extensive experience with the cannabis market. Even in spaces where Amyris had some expertise, such as topical cosmetics, Lavvan shared insights from its team's prior experiences with cannabinoids in topical products, including knowledge about how patients were using topicals.

92. Further, Lavvan recognized a strong potential market for CBG—a molecule that was not even originally identified as a possible cannabinoid for commercialization in the first place—and prioritized its development and commercialization early in the process. CBG is a naturally occurring cannabinoid in hemp plants and a precursor to CBD—a molecule that *was* on the RCL Agreement’s immediate developmental road map. Once Lavvan identified that CBG could be a commercial product in its own right, the Parties put a focus on collaboratively developing that product, and Lavvan, in agreement with Amyris, set new commercialization targets for CBG.

93. In the months that followed after Lavvan expanded its team, Melo repeatedly touted Lavvan’s expertise during earnings calls. He explained that Lavvan had “significantly expanded [its] capability with the hiring of an experienced team for the cannabinoid markets.” As a result of these hires, “the nature of conversation and the depth of discussion and knowledge has changed dramatically.” Melo referenced “the value in great partners is they typically have insights on molecules more than we do” and admitted his “surprise[.]” when Lavvan “identified a molecule. . . that we quickly were able to make, and that molecule is significantly more valuable than CBDA.” This was a reference to the decision to commercialize CBG as described above.

#### **F. Amyris Reveals That it Has “Seller’s Remorse” and Transforms from Willing Partner to Combatant**

94. On August 6, 2019, shortly before Lavvan announced Closner’s appointment as its CEO, Closner traveled to New York, New York, for what would turn out to be an eye-opening in-person meeting with Amyris CEO Melo.

95. At the meeting, Melo told Closner he wanted to lay his “cards on the table.” He told Closner that Amyris actually hated the deal it had agreed to with Lavvan and that Amyris was intent on frustrating the deal as much as possible unless and until Amyris succeeded in

changing the deal's terms. Melo explained that the Parties may have entered into a written deal, but Amyris understood that it could thwart that deal or force Lavvan to change the agreement simply by failing to cooperate. Melo stated that he did not understand why Lavvan should have control of manufacturing or commercialization, given that, in its other deals, Amyris controlled that process. Then, for the first time, Melo told Closner that Amyris had, or was in the process of obtaining, a suitable manufacturing facility in Oregon.

96. These shocking admissions and threats struck at the heart of Lavvan's business plan. Given Melo's expressed disdain for the RCL Agreement, Closner asked Melo why Amyris agreed to sign it just five months earlier. Melo explained that he needed to be "careful" about what he said "because this may end up putting me on the witness stand." Even so, Melo proceeded to admit that Amyris was facing serious difficulties when it signed the RCL Agreement, and now had a case of "seller's remorse." Melo likened Amyris's decision to enter the RCL Agreement to 'cutting off the arm to save the body.' Closner told Melo it sounded like Amyris was refusing to perform unless the RCL Agreement changed. Melo did not disagree with that characterization.

97. At the same August 6 meeting, after acknowledging that Lavvan had satisfied all financial obligations to date, Melo commented obliquely that Amyris had concerns about Lavvan's ability to make milestone payments when they came due. Melo started to lay the groundwork for a pretextual concern that Amyris had supposed doubts about Lavvan's ability to perform its payment obligations.

98. Only a few weeks later, Melo again reiterated Amyris's 'seller's remorse' and rejection of the fundamental nature of the RCL Agreement. On August 19, 2019, Amyris CFO Kathleen Valiasek reached out to Lavvan CEO Closner, seeking a quote from him for a draft

press release touting that Amyris had “demonstrated a process to deliver the *highest* purity and quality CBD at the *lowest* cost it has seen reported.” This being the first that Closner had heard of this supposed success, and with no data or documentation to support the claim, Closner did not support the press release. After congratulating Amyris on the achievement, Closner explained that Lavvan was not “comfortable having this news come out at this point and in this way,” but mentioned the Parties could discuss Amyris’s progress “in more detail at next week’s meeting” and also “discuss[] the public communication around it.” Even one year later, Amyris still has not provided *any* data that could support such a claim.

99. Melo and Valiasek did not take Closner’s polite rejection well. Melo responded “this is a great example of what needs to change” and that Amyris “*will not continue this program with this relationship structure. . . .* We have no example where we are subservient to the other party – we are truly partners in every sense from the development to the commercialization.” (emphasis added).

**G. Amyris Materially Misstates Its Progress under the RCL Agreement and Misleads the Market**

100. Amyris’s public comments about Lavvan, however, told a very different story and provide no support for its pretextual concerns about Lavvan’s ability to pay. For example, on August 5, 2019—*one day before* Melo raised the company’s putative concerns privately with Closner—Melo touted Lavvan, and also told investors during Amyris’s earnings call that Amyris would receive \$25 million from Lavvan in 2019, and \$50 million from Lavvan in 2020, adding that he had a “high level of confidence in the \$50 million,” with “potential to get up to double that.” He explained the entire \$300 million might be collectible within three years, but the “majority” would be earned “over the next 18 months.”

101. Melo made similar statements to investors on an October 2, 2019, earnings call. After once again praising Lavvan's expertise, Melo stated that Amyris had "successfully produced" a CBD molecule and an undisclosed second cannabinoid molecule. He stated that Amyris's pursuit of two molecules made Amyris "more optimistic about the milestone payments" of "\$300 million total for the 3-year project." He projected "\$50 million on the low end, \$100 million on the high end for the cannabinoids milestone payments for next year," and stated, "we feel very secure about the low end, and I think we could be somewhere between the low and the high." Melo further stated, "Both molecules, we'll be doing commercial production in 2020. And for one of them, we could be as early and plan on being as early as mid-year." Of course, the timing for commercialization was Lavvan's decision, not Amyris's.

102. On November 7, 2019, during another earnings call, Melo continued to promise major revenue to investors from Amyris's collaboration with Lavvan. Melo stated that Amyris's payments from Lavvan would be "between \$20 million to \$25 million this year," and "\$70 million to \$75 million next year."

103. Melo's representations to investors did not reflect reality—because by the fall of 2019, it was clear that Amyris would not reach *any* milestones that year and therefore would not be entitled to any further payments beyond the \$10 million upfront payment it received in May. Further, based on the RCL Agreement, the only way for Amyris to even theoretically earn more than \$15 million in payments would be if they hit a commercial scale milestone—but the Parties had not even selected a [REDACTED] by that point, and there would be no way to do so and commercialize the necessary volume required to achieve any additional milestone before year's end. Indeed, before hitting a commercial milestone, Amyris would need to [REDACTED] [REDACTED] (they had not and still have not), [REDACTED]

[REDACTED] (they had not and still have not), and then Lavvan would have [REDACTED]

[REDACTED]” *Each* of those steps would take at least a few months by themselves. Melo thus knew or should have known that his statements to investors were false and misleading.

104. Lavvan does not owe Amyris any payments, nor has Lavvan ever been deficient or late on a payment to Amyris. In fact, more than nine months after Melo promised investors tens of millions in future milestone payments, Amyris still has not achieved a single developmental milestone and therefore has not earned a single additional milestone payment.

**H. Based on Lavvan’s Trade Secrets, the Parties Agree to Commercialize CBG Simultaneously**

105. As the partner in the collaboration with both the experience in the cannabis and cannabinoid field and the responsibility for commercialization, Lavvan developed, and shared, several trade secrets with Amyris under the confidentiality provisions of the RCL Agreement.

106. Lavvan regularly shared key market information about various cannabinoid opportunities, including cannabinoid-by-cannabinoid commercialization and regulatory analyses. These analyses included, for example, consideration of country-specific compliance requirements for cannabinoids and whether the cannabinoid had been approved for certain uses, or for import or export. As part of this work, Lavvan also collected, reviewed, and synthesized various public studies and regulatory findings. Lavvan maintained and regularly updated this specialized knowledge of market opportunities and regulatory requirements for various cannabinoids. This information was especially valuable to identifying go-to-market opportunities in the nascent biosynthetic cannabinoid space.

107. These trade secrets are not generally known, and are the result of proprietary market research and analysis in a new market. Lavvan had to expend effort to identify the relevant information needed and then collect that information, using its own expertise and knowledge. The biosynthetic cannabinoid space is a cutting-edge field with a limited number of companies all attempting to move forward and commercialize biosynthetic cannabinoids. Using this information, competitors could identify the best products and best markets to target for commercialization.

108. Under the RCL Agreement, the Parties were targeting CBD as the first cannabinoid. By leveraging its market and regulatory trade secret knowledge, Lavvan identified that CBG had an easier runway to market than other ‘minor’ cannabinoids, and shared this information with Amyris with the understanding that Amyris would use that information to prepare strains for Lavvan to manufacture and commercialize in accordance with the RCL Agreement. With this deep knowledge of cannabinoids and the market as described above, Lavvan understood that CBG would be a building-block molecule that Amyris would necessarily have to develop in some capacity anyway and that there was the potential for there to be a significant and profitable commercial market for that cannabinoid as well.

109. In September 2019, Lavvan’s team explained their vision to Amyris and, in their December 2019 Joint Steering Committee, the Parties agreed to develop CBG and CBD simultaneously. Lavvan repeatedly requested—and received—confirmation that due to the similarity of the process, it would not cause any delay in Amyris’s production of CBD. Because CBG would have been developed by Amyris as part of the CBD development process, Lavvan agreed to move forward with CBG, with the Parties classifying it as [REDACTED] under the RCL

Agreement, which provided an appropriate project plan and milestone payments upon commercializing CBG.

### **I. Amyris Misrepresents Its Role, Rights, and Progress Under the RCL Agreement**

110. Amyris CEO Melo not only misrepresented Amyris’s financial prospects during his November 7, 2019, earnings call with investors, but also made numerous statements demonstrating that Amyris did not intend to perform in good faith under the RCL Agreement.

111. Melo stated that Amyris had “certain carve-outs in the agreement with Lavvan for Amyris to serve [REDACTED] on our own with cannabinoid ingredients.” These were material misrepresentations of Amyris’s rights under the RCL Agreement. Amyris had no such rights to [REDACTED], as explained above, and only conditional limited rights to develop cannabinoids for use “[REDACTED]

[REDACTED]” [REDACTED]

[REDACTED]. After Melo’s misrepresentations about the Parties’ respective intellectual property rights, Lavvan received blowback from its investors about Amyris’s supposed carveouts.

112. Worse, during the same call, Melo shockingly revealed that Amyris was “providing samples” to Lavvan and “to some of Lavvan’s customers.” Melo’s statement that Amyris had provided samples to Lavvan was plainly false. The other component of Melo’s statement, that Amyris had provided samples to some of Lavvan’s customers, was a blatant admission of a material violation of Lavvan’s intellectual property rights. Lavvan had an *exclusive license*—including as to Amyris—over “[REDACTED]” to commercialize cannabinoids. [REDACTED]



[REDACTED]. But Melo admitted that Amyris did just that.

113. Melo further stated on the November 7, 2019, earnings call that Amyris continued to view “the cannabinoids opportunity” as one of its “most valuable businesses,” and claimed that Amyris would be “the first synthetic biology company to successfully commercial-scale multiple lower-cost highly pure cannabinoids.” This statement was badly misleading. *Lavvan*, not Amyris, controls manufacturing and commercialization under the RCL Agreement. Amyris’s role is limited to developing the yeast strains and related technology that produce cannabinoids *for Lavvan*. Under the RCL Agreement, Amyris is responsible for research and development—and Lavvan controls, and has exclusive rights to use licensed intellectual property for, manufacturing and commercialization of cannabinoids. Melo nevertheless stated to investors that Amyris intended to manufacture and commercialize cannabinoids *itself*.

114. As another example of Amyris’s disregard for Lavvan’s intellectual property rights, in Amyris’s Credit and Security Agreement, dated November 14, 2020 and publicly filed on November 20, 2019, Amyris misrepresented Lavvan’s lien on Amyris’s IP. The filing explained that Amyris had received yet another loan to stay afloat, and included a copy of the loan agreement, which inaccurately described Lavvan’s lien as covering only “the Intellectual Property of the Company being licensed to Lavvan pursuant to the” RCL Agreement. In reality, Lavvan’s lien was much broader, [REDACTED]

[REDACTED] In effect, the lien covers [REDACTED]  
[REDACTED]. Even though Lavvan notified Amyris of this misstatement by letter in April 2020, Amyris did not correct its

misrepresentation of the lien while completing its private placement in June 2020 and repeated the same misstatement in their 10-K filed on August 10, 2020.

115. In addition to misleading its own investors, Amyris's inaccurate messaging about its role (including its intellectual property rights) in its partnership with Lavvan confused the investors Lavvan was working with for the company's next round of funding. Amyris's conduct actively undermined Lavvan by publicly misrepresenting the RCL Agreement and by suggesting that Amyris, rather than Lavvan, would be the first to commercialize certain cannabinoids. Amyris's subversive efforts reflected in these misstatements also severely damaged the working relationship of the team members at Lavvan and Amyris who were working on this project, as Amyris staff were constantly working at cross-purposes or refusing to share critical information with Lavvan.

116. During a meeting on December 11, 2019, Lavvan CEO Closner told Amyris CEO Melo that he needed to stop misrepresenting the terms and progress of the RCL Agreement to the public. Amyris CEO Melo responded that his propensity to over-promise was "like an addiction" and "something he could not control."

117. In light of Melo's admitted "addiction" that was causing harm to Lavvan and the Parties' venture, Lavvan was forced to attempt to place constraints on Melo. As described further below, in an effort to curb Amyris's public misstatements (and an acknowledgement of same), Amyris CEO Melo agreed to amend the RCL Agreement to [REDACTED]

[REDACTED]. Unfortunately, as also explained below, Melo has not honored these terms, and has selectively disclosed information at Lavvan's expense.

## J. Amyris Creates a Scramble to Hit Its Year-End Numbers

118. In the fall of 2019, recognizing that it had not achieved the progress it needed to achieve to trigger any milestone payments, Amyris began demanding that Lavvan accelerate milestone payments without regard for Amyris’s progress. For example, on October 24, 2019, Amyris sent a proposal for “restructured milestones,” seeking to accelerate \$55 million worth of payments including by creating new interim milestones not agreed to in the RCL Agreement, such as producing a “100g sample” of THC.

119. Contrary to what it was telling its investors, Amyris quickly fell off the development pace contemplated in the RCL Agreement. In developing each yeast strain, Amyris's major efforts centered around engineering a yeast strain and downstream processing solution to produce high yields of the targeted cannabinoid, which met the associated economic parameters, while achieving a level of purity that met the product specifications. By December 2019, Amyris's efforts with respect to CBD and CBG ([REDACTED]) had experienced significant and worrisome delays. For example, as explained earlier, Amyris had to demonstrate that it met a target [REDACTED] [REDACTED] [REDACTED] [REDACTED], but was nowhere near that goal.

120. Recognizing the impact that its lack of progress would have on its end-of-year earnings, Amyris initiated a series of frantic requests to amend the RCL Agreement to accelerate the timing and recognition of existing milestone payments. After telling Lavvan that it did not like the RCL Agreement, after having fallen off the development pace, and after publicly admitting to past conduct that breached the RCL Agreement and to the intent to engage in conduct that would further breach the agreement, Amyris now wanted to collect unearned milestone payments anyway—or at least be able to report additional revenue.

121. Amyris again proposed changing the RCL Agreement to include additional payments from Lavvan, including on December 2, 2019, when Amyris, claiming to need “support” for a “faster time to market,” proposed (i) an additional \$10 million for “regulatory materials for topical applications for CBD” and (ii) changing Milestone Number 2 to \$20 million

██████████ ██████████. Overall, Amyris’s latest proposal to change the RCL Agreement contained about \$60 million in new or accelerated payments, without regard for the progress of the project to date or commercial viability. Lavvan did not agree to accelerate or change the milestone payment structure.

122. On December 11, 2019, Amyris CEO Melo and Lavvan CEO Closner met in Amyris’s offices in California. Melo told Closner that he needed to be able to send Lavvan invoices showing 2019 dates for work that would not be completed until 2020. He explained that Amyris was banking on \$70 million more from Lavvan before the end of 2020. He promised that Amyris would hit milestones in early 2020, stating that unless the Amyris lab “burned down,” Amyris would achieve the CBD milestone by the end of February. (This milestone still has not been met some 6 months later.)

123. Lavvan had no obligation to amend the RCL Agreement to suit Amyris's public relations desires, and no obligation to allow Amyris to invoice Lavvan in 2019 for milestones Amyris had not achieved. Further, Amyris refrained from sharing data on its strains and development with the frequency and specificity necessary for Lavvan to understand Amyris's progress. In short, even though Amyris refused to share the raw data to support its supposed progress, it sought Lavvan's approval to invoice for alleged progress which proved not to have been achieved.

124. Amyris intensified the pressure on Lavvan to produce an amendment when Amyris COO Eduardo Alvarez told Lavvan President Etan Bendheim that completing the amendment was “more important” than the Parties’ work toward commercial production of cannabinoids, and impliedly threatened to give Amyris’s operating team “instructions”—slowing or stopping the development team’s progress—based on the status of the amendment. Faced with this extreme pressure, Lavvan reluctantly worked to accommodate Amyris’s requests in order to maintain the relationship. To that end, Lavvan’s team scrambled over the winter holidays to draft a proposed amendment to the RCL Agreement that would accommodate Amyris’s stated invoicing needs but that was acceptable to Lavvan from accounting, legal, and business standpoints.

125. Around the same time, Amyris forced its employees to work through the winter holidays to deliver CBG samples to Lavvan. Lavvan had not requested the samples (as at this point Amyris had not yet shown that the samples would meet the required product specifications) or provided any instructions for such a delivery, but learned that Amyris’s employees incorrectly were led to believe that Lavvan had imposed the deadline that required them to work through the winter holidays—further eroding the teams’ working relationship.

126. Evidently hoping to end the fiscal year with a positive public message, Amyris issued a press release on December 27, 2019, stating that it had “successfully shipped the first cannabinoid to its partner, Lavvan.” But Amyris’s samples were unusable and certainly not what was called for under the project plan. As the samples called for under the RCL Agreement were for [REDACTED], at that time the RCL Agreement stated that they needed a minimum product purity of over [REDACTED]%, and practically closer to [REDACTED]% to move toward commercialization. But the shipped sample had only about [REDACTED] and included

██████████ that rendered it unsuitable for any external use. On information and belief, Amyris forced its employees to work over the winter holiday period not to provide Lavvan with useful material or information about Amyris's progress, but instead to support its strategy to recognize future revenue from the RCL Agreement in 2019 (and to push out a promotional press release).

127. Amyris ultimately rejected Lavvan's proposed amendments which would have facilitated Amyris's requested objectives. Instead, as Amyris CEO Melo explained in a March 2020 phone conversation with Lavvan CEO Closner, Amyris had realized that accounting rules allowed it to book sufficient revenue ahead of time even without the amendment. Ultimately, in its much-delayed financial reporting for Q4 2019, Amyris recognized \$18.3 million in cumulative revenue under the RCL Agreement even though it had earned only \$10 million in payments. Amyris accomplished this by using accounting rules that allow it (subjectively) to book a percentage of completion of the milestones.

128. During the same period, Amyris sought once again to add or adjust milestones so it could receive more milestone payments sooner. On February 20, 2020, Lavvan rejected those proposals, noting that Lavvan had previously been willing to amend the agreement based on Amyris's past requests, but that Amyris had rejected those proposals and was content to proceed under the original agreement. Also noting that work was *behind* schedule and that Amyris was not entitled to any additional milestone payments at that time, Lavvan declined to accelerate payments but offered to "mitigate Amyris's concerns around output volumes" and adjust certain commercial manufacturing milestones, provided Amyris got its projects back on track.

129. Lavvan's offer was particularly accommodating given that Amyris was six months behind on CBD objectives and that Lavvan had been provided limited data from Amyris about the CBD strains it was developing. Amyris was also behind on eliminating THC from the

CBD strain as [REDACTED]. Amyris's delays in providing product samples were creating issues with Lavvan's progress toward drafting regulatory filings and providing customer samples. Moreover, after Lavvan plugged the costs provided by its manufacturer, the Selected Manufacturer, into the limited data Amyris provided, Lavvan realized that the costs far exceeded the cost per kilogram that Amyris needed to hit under the milestone.

**K. February 23 and March 1, 2020, Calls Between Closner and Melo**

130. On February 23, 2020, two days before an Amyris board of directors meeting, Amyris CEO Melo and Lavvan CEO Closner spoke by phone, in a conversation that is emblematic of Amyris's lack of good-faith performance of the RCL Agreement and disregard of Lavvan's intellectual property rights.

131. While admitting that he "was not close enough to know exactly why," Melo asserted that Lavvan owed Amyris milestone payments. Closner assured Melo that no milestone payments were due and encouraged Melo to facilitate the necessary conversations with his staff to understand why Amyris felt that it deserved payments for milestones it had not yet achieved. Closner also explained, "when the milestone gets hit, nothing would make us happier than having to pay it."

132. More concerning, Melo indicated that the Amyris board—to which Melo would be reporting in two days—was looking for a way out of its deal with Lavvan. Melo rehashed the pretextual excuse he had previewed in his initial meeting with Closner, claiming that the board did not believe Lavvan would be able to pay the milestone amounts when they came due and was looking for "options."

133. Worse, Melo stated that one of those "options" was for Amyris to commercialize cannabinoids *without* Lavvan, in direct violation of the most basic tenets of the RCL Agreement. Melo claimed that there was an unintended but "specific carve-out" that allowed Amyris to

commercialize and exclude Lavvan in a “quite critical and significant” market. Moreover, Melo asserted that this mysterious and unidentified loophole was not intended by the Parties, but he was willing to exploit it anyway.

134. But Melo refused to tell Closner what provision of the contract contained this supposed “carve-out” or loophole. Instead, Melo simply claimed that Amyris “completely” had the right to manufacture cannabinoids on its own, without Lavvan. Melo threatened that unless Lavvan would agree to whatever new terms Amyris demanded, Amyris would commercialize cannabinoids on its own and leave Lavvan behind. In other words, unless Lavvan acceded to Amyris’s demands, Amyris would take Lavvan’s intellectual property and use it for Amyris’s own purposes and at Lavvan’s expense.

135. The RCL Agreement, of course, contains no such “loophole.” Melo’s threatened course of action would constitute a material breach of [REDACTED]. Indeed, the supposed loophole would undermine the entire point of the RCL Agreement. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

136. Likewise, by developing, manufacturing, and commercializing cannabinoids without Lavvan, Amyris would necessarily use the intellectual property it exclusively licensed to Lavvan, and would infringe Lavvan’s rights to that intellectual property.

137. Melo further informed Closner for the first time of Amyris’s specific, imminent plans to misappropriate Lavvan’s intellectual property: Amyris was hosting a large cosmetics event in Barcelona for 200 of the world’s largest brands, at which Amyris intended to make



public Lavvan's CBG data (which Melo incorrectly characterized as "Amyris's" data), and Melo said his plan to do so would "absolutely change the industry."

138. Remarkably, Melo criticized Closner for standing on Lavvan's rights and Amyris's obligations under the RCL Agreement. Melo stated: "Not one partner has ever stood with us and said, *We're only going to do what the contract says.*" He added, "if that ever happened, we would be out of business today."

139. Approximately one week after their February 23 phone call, Amyris CEO Melo spoke on the phone with Lavvan CEO Closner to provide an update after Amyris's board meeting. Melo stated that the "biggest sensitivity" for Amyris's board, finance team, and auditors was Lavvan's "ability to pay." Melo also raised some ambiguous and vague "critical parts that need to be landed between the teams" regarding the collaboration. Closner suggested that Amyris identify specific areas of concern, which Lavvan could then address.

140. As noted above, Melo also explained to Closner why Amyris had not followed through on its requested amendment to permit Amyris to invoice for milestone payments it had not yet achieved: After a lot of internal "back-and-forth," Amyris had determined accounting rules permitted it to recognize sufficient revenue without having invoiced or received payment from Lavvan.

#### **L. Lavvan Contracts with the Selected Manufacturer for Commercialization, Continues Staffing Up**

141. In March 2020, relying on what turned out to be false information about Amyris's progress, Lavvan made plans to move forward with production of various cannabinoids.

142. Lavvan had previously conducted an exhaustive search (with the help of an expert consultant) in the United States and Canada for an appropriate facility to prepare for production of the cannabinoids Amyris was supposed to deliver. After visiting, inspecting, and negotiating

with various commercial manufacturers—and conferring with Amyris during the search—Lavvan ultimately settled on the Selected Manufacturer to conduct an extensive engineering study as a precursor for it to manufacture and commercialize the cannabinoids. The Selected Manufacturer was the best choice with much lower costs than the alternatives.

143. During the search for a commercial manufacturer, Lavvan also shared with Amyris trade secret information about the selection process and criteria for the eventual commercial manufacturer of the yeast strains Amyris was developing. Lavvan shared with Amyris presentations and analyses detailing the strengths and weaknesses of various manufacturers, especially as those factors impacted the manufacturer's ability to produce materials that meet regulatory requirements. In one presentation, for example, Lavvan flagged methods through which a particular manufacturer could control allergens.

144. Then, after Lavvan selected the Selected Manufacturer as the commercial manufacturer to conduct an engineering study to position Lavvan to proceed with commercialization, Amyris again participated in several meetings where Lavvan shared proprietary market and regulatory information about what it would need from the Selected Manufacturer's manufacturing process for the cannabinoid opportunities.

145. Lavvan developed its trade secrets about these manufacturers and relevant factors concerning the selection of a manufacturer with the assistance of a consultant, and also by leveraging information it learned from prospective customers (such as the Fortune 500 companies) about how they selected suppliers and vetted supply chains. That is, these factors represent not only information about each manufacturer, but about the factors that make a manufacturer a good partner for the specific cannabinoid opportunities that Lavvan identified.

146. Like Lavvan's market research and collected regulatory information, these trade secrets are not generally known, and are the result of Lavvan expending its time, effort, and funds to determine the best strategies, methods, and plans for commercializing biosynthetic cannabinoids.

147. Since signing the RCL Agreement, Lavvan had staffed up considerably in anticipation of its obligations and future business. As noted, Lavvan successfully recruited Closner and seven other former MedReleaf executives to join Lavvan a few months after signing the RCL Agreement. In addition, in 2019, Lavvan hired three additional senior executives (one again from MedReleaf), based on the anticipated timeline for commercialization. And in December 2019, based on Amyris's assurances that milestones would be met by February 2020, Lavvan identified five additional roles for which it was hiring, all directly related to commercialization. These roles included, among others, scientists, quality assurance experts, and regulatory specialists. Lavvan filled some of these positions, hiring a senior scientist and quality assurance manager in March 2020, before Lavvan learned that Amyris was significantly further behind than Lavvan had been led to believe. Lavvan was interviewing for this next phase of staffing up until recent months.

**M. The Parties Amend the RCL Agreement to Deter Further Public Misstatements and Adjust Specifications of Cannabinoids**

148. On March 11, 2020, the Parties executed Amendment No. 2 to the RCL Agreement. The amendment was designed to accomplish three important things.

149. First, Amyris now agreed that any public statements [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

150. Second, the Parties agreed [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

151. Third, the Parties memorialized revisions of additional product specifications.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**N. Relations Further Deteriorate as Amyris Continues to Fall Behind and Lavvan Refuses to Lie to Amyris's Auditors and Bankers**

152. Amyris has sought to enlist Lavvan's assistance throughout 2020 to confirm certain information about Amyris's progress under the RCL Agreement for various internal and external parties.

153. Starting in January 2020, Amyris COO Alvarez insisted that Lavvan confirm via e-mail that Amyris was developing three molecules simultaneously—CBD, CBG, and THC—on Lavvan's behalf. Lavvan had proof of development for CBD and CBG, but none on THC at that time. Amyris, however, had represented that it was pursuing approval from the Drug Enforcement Administration (DEA) and was constructing the lab to begin production on THC,

and thus would begin development for it shortly. Lavvan would later learn that this representation was false and lab construction had not even begun.

154. In mid-February 2020, Amyris hired a new CFO. Shortly thereafter, Amyris's revenue-recognition strategy drew the attention of its internal and external auditors, and in March 2020, Amyris sought to enlist Lavvan to help justify Amyris's accounting. Amyris wanted Lavvan to validate whether Amyris had completed certain work toward milestones so that Amyris could recognize revenue in connection with that work.

155. In order to book against that future revenue, however, Amyris needed Lavvan to sign a letter about Amyris's performance. Closner explained that Lavvan would naturally need to review such a letter before signing. Melo explained that it was important for Amyris to be able to book future payments from Lavvan because otherwise, Amyris would "miss street expectations by about four to five million bucks."

156. Around this time, Amyris sent Lavvan a draft letter, addressed to Amyris's outside auditor Macias Gini & O'Connell LLP, for Lavvan to sign. The draft was riddled with misstatements and misrepresentations. For example, the draft stated that Amyris had "[REDACTED] to reach commercial Milestone Number 10 for [REDACTED]." But Amyris had not (and still has not) met commercial Milestone Number 10 and was therefore not entitled to that milestone payment. The draft also stated that "Lavvan has agreed for Amyris to commence work on CBD, [REDACTED] [THC] and [REDACTED] [CBG]."

157. Rather than giving Lavvan the freedom to amend the letter to accurately reflect the work Amyris had done to date, Melo told Lavvan to simply delete—but not provide any comment on—any language Lavvan did not "like."

158. Meanwhile, Amyris continued to represent to the public that it was making progress on the development of cannabinoids, with or without Lavvan. On March 6, 2020, Amyris issued a press release stating: “Amyris is developing CBD through fermentation technology and believes it will be the first company to provide highly pure and efficacious CBD from this technology at commercial scale.”

159. In a presentation a few days later, Melo claimed that production for two cannabinoids would begin in 2020. Melo said that Amyris intended to become the leading supplier of cannabinoids, despite the restrictions in the RCL Agreement prohibiting this. In the same presentation, Melo also stated that Amyris viewed “CBG as a breakthrough cannabinoid” and was “in active clinical testing with one of the leading skin labs in the world” which it hoped would be beneficial for “our use of CBG in skin care.” Once again, Amyris admitted to shipping CBG to an outside party contrary to the terms of the RCL Agreement.

160. On the same day as the March 6 press release, Melo and Closner spoke on the phone again. Closner told Melo that Amyris’s press release and presentation were misleading, because Amyris was, pursuant to the RCL Agreement, developing cannabinoids *on behalf of Lavvan*. Amyris’s more recent public statements not only omitted that important fact, but affirmatively created the false impression that Amyris was permitted to commercialize cannabinoids on its own behalf, repudiating the RCL Agreement and further eroding Lavvan’s credibility and reputation.

161. Amyris’s CFO later joined that March 6 call and sought Closner’s confirmation that Amyris was working on three molecules (including THC) and would be reaching a milestone on March 31 (the same milestone Melo had promised would be completed by the end

of February “unless the lab burns down”). Closner could not and did not provide the requested confirmation—and Amyris has *still* not hit the milestone.

162. Lavvan signed a letter for Macias Gini & O’Connell LLP on the morning of March 13. The letter indicated Lavvan’s understanding that Amyris would, before the end of the month, provide confirmatory data indicating that it had met additional milestones. Later that day, Amyris submitted its annual report for 2019 and hosted its investor call. For the second year in a row, it lost over \$200 million. Of its reported revenue, 12% came from Lavvan. Amyris *still* has not delivered the confirmatory data it was to provide Lavvan by the end of March. The letter that Amyris fashioned for its own auditor, and that Amyris induced Lavvan to sign by falsely representing it would provide certain data to Lavvan, has now proven to be fraudulent.

163. Only a few weeks after its March 13 annual report and investor call, Amyris asked Lavvan to participate in a different diligence process, this time with its investment bankers. Lavvan CEO Closner received several messages from the Amyris team about the importance of the diligence call, which was related to the \$200 million private placement Amyris would go on to complete in June.

164. Surprisingly, this time Amyris wanted Lavvan to confirm for the bankers the exact *opposite* of what it was confirming for auditors: that Amyris was *not* working on THC. Because THC remains a controlled substance subject to strict regulatory scrutiny, Amyris sought this reassurance for regulatory and investor-relations reasons. That is, Amyris wanted to be able to book revenue toward work on THC while telling its bankers it was *not* working on THC. As Melo impliedly confirmed in future calls with Closner, it was apparent to Lavvan that Amyris was trying to mislead the bankers about its THC work because the diligence questions that the

bankers provided included the leading question: “Please confirm that you are only working on CBD and CBG and not THC products.”

165. When Closner confronted Melo about this inconsistency during a call on April 6, 2020, and asked Melo “how do you want me to answer that, John?” Melo was silent. It became clear to Lavvan that its refusal to go along with Amyris’s scheme only furthered Amyris’s animosity toward Lavvan.

**O. Relations Badly Erode in Early April 2020, and Questions Arise Regarding Amyris’s Handling of CBG Samples**

166. On April 3, 2020, during a presentation Amyris was giving, Lavvan learned that Amyris had produced “[REDACTED]” of CBGa—an inactive form of CBG—in December 2019 and January 2020. Remarkably, Amyris claims that it was able to achieve a recovery yield of only approximately [REDACTED] of final CBG samples (less than [REDACTED]%) from the initial [REDACTED] of CBGa. To date, Amyris has delivered to Lavvan only [REDACTED], has stated that it sent CBG samples to others without Lavvan’s consent, and has repeatedly refused to provide a meaningful accounting for what happened to the rest of the product. Amyris’s apparent dissemination of intellectual property that Lavvan paid Amyris to develop undermines the terms and purpose of the RCL Agreement: to develop yeast strains to produce biosynthetic cannabinoids *exclusively for Lavvan* to become the exclusive market leader and provider of such cannabinoids.

167. On April 6, 2020, Amyris CEO Melo and Lavvan CEO Closner had a heated exchange regarding a variety of topics and addressing the Parties’ growing tensions and grievances. Closner called Melo to discuss Amyris’s lack of progress hitting its milestones. Closner reminded Melo that he had, at Melo’s insistence, agreed to sign a letter for Amyris’s auditors indicating that Amyris would provide confirmatory data demonstrating that it had met



another milestone before the end of March. As of April 6, Amyris still had not done so—and any data that had been shared confirmed that Amyris was not even close.

168. Amyris's lack of progress was a surprise to Lavvan, which had been counting on Amyris's promises to meet certain milestones in order to move forward. The lack of progress was a surprise in part because Amyris consistently withheld developmental and research information from Lavvan, preventing Lavvan from being able to effectively comment or assist in the design process, thus sidelining Lavvan's tremendous experience. That is, Lavvan's intellectual property (such as sequence data, enzyme knowledge, cannabinoid genetic knowledge) could not be effectively leveraged without information-sharing from Amyris. But, with few exceptions, Amyris provided insufficient information, and strictly on a [REDACTED] [REDACTED] [REDACTED]. Amyris provided this infrequent information in summary slide format rather than as raw data that Lavvan's highly credentialed scientists could effectively analyze in decision making and planning, as well as to assist in development, investor relations, or sales efforts. Incredibly, Amyris asserted that it would not provide more detailed information because doing so would involve sharing its intellectual property with Lavvan, something that Amyris claimed it was not required to do. Of course, this was the same intellectual property that Amyris licensed to Lavvan under the RCL Agreement.

169. This lack of transparency, which Closner raised with Melo multiple times to no avail, badly undermined the collaboration. For example, because Amyris did not timely provide updates to Lavvan about its developments, Lavvan prematurely contracted with the Selected Manufacturer for manufacturing even though Amyris was nowhere near the necessary developmental milestone. Amyris, despite being part of the various meetings and conversations with the Selected Manufacturer, never told Lavvan about Amyris's shortcomings and that it

would not meet the agreed-upon schedule, and impliedly confirmed that Lavvan should proceed with production with the Selected Manufacturer.

170. In response to Closner’s concerns regarding Amyris’s lack of progress, Melo revealed that Amyris planned to start manufacturing CBD at commercial scale in 2020 and would also be scaling CBG in the second quarter of 2020, with a facility ready to develop, scale, and manufacture. Melo told Closner that Lavvan could either “be a part of that or not—it’s your choice.” Melo refused to disclose where this purported facility was and told Closner that if he couldn’t figure out why Amyris was allowed to move forward *without Lavvan*, then Closner should “get attorneys to find it” in the RCL Agreement.

171. Melo proclaimed, “we don’t need you in this deal at all” and made clear that Amyris intended to manufacture and commercialize cannabinoids, regardless of whether Lavvan was involved. Supporting the view that Amyris likely fermented far more than [REDACTED] of CBG in December 2019 and January 2020, Melo likewise confirmed that Amyris had sent *Lavvan’s CBG sample*—the one that Amyris had forced its employees to work over the holidays to produce supposedly at Lavvan’s demand—to a number of third-party clinical labs for testing, without Lavvan’s knowledge or consent. According to Melo, Amyris sent samples to Utah for testing against coronavirus, and samples were also being used to determine “what the impact is on the skin microbiome.”

172. When Closner expressed serious concerns over Amyris’s breaches of the Parties’ agreement and lack of transparency in the development process, Melo told Closner that Amyris’s technical team had “no respect for your team, and they’re not going to share with your team.”

173. Melo went on to contend that the Parties’ arrangement was “not contract R&D,” insisting: “We are not going to do contract R&D. We don’t do it for anyone in the world,” and

“we’re not doing it for you guys.” Melo’s statements doubled down on the “seller’s remorse” he had expressed when he first met with Closner and constituted a rejection of the fundamental terms of the RCL Agreement and Lavvan’s control over the manufacturing and commercialization process.

**P. Tensions Come to a Head at the Joint Steering Committee’s April 2020 Meeting**

174. On April 14, 2020, Amyris and Lavvan had a Joint Steering Committee meeting to discuss the progress of Amyris’s work. During the meeting, (1) Lavvan learned that development on all three cannabinoids was far behind, (2) Amyris tried to pressure Lavvan to unprofitably commercialize prematurely anyway, (3) Amyris shifted its position on where it sent Lavvan’s CBG samples, and (4) Amyris refused to continue work on THC without different milestone structures.

175. At the start of the meeting, Amyris confirmed that COVID-19 had a short-term and minimal impact on its development efforts because Amyris was legally permitted to continue work and was prioritizing this project and development. Indeed, Amyris continued to make progress after COVID-19 at a faster rate than previously, though it was still woefully insufficient under the RCL Agreement.

176. During the meeting, Amyris confirmed that it still had not met any further milestones. Nevertheless, presumably eager for another press release, and certainly eager to collect milestone payments, Amyris pushed for Lavvan to move CBG to the commercial manufacturing phase, and CBD to the pilot plant stage, even though neither CBG nor CBD were ready for such a step.

177. Here, Lavvan’s control over manufacturing was critical. Because of Amyris’s lack of development progress, the manufacturing costs were still multiples higher than called for under the milestone standards, and purity levels were well below standards agreed to in

Amendment No. 2 just one month earlier. Nevertheless, Amyris insisted that the recently agreed-upon specifications were essentially unnecessary, and that Lavvan should move forward anyway—even though it was not economically feasible to do so. Amyris had strong incentives to push molecules toward the manufacturing stage, and doing so would effectively push the costs of further development onto Lavvan, given that manufacturing and commercialization were Lavvan’s responsibility. That is a key reason Lavvan required that the Parties set specific production-costs-per-kilogram targets, backed up with evidence that strains could meet those targets at commercial scale: to ensure that products reaching the commercialization stage were economically viable.

178. During the Joint Steering Committee meeting, Amyris COO Alvarez had described to Lavvan how Amyris had *regularly* commercialized unprofitable molecules and then explained how they hide it financially. Alvarez explained that Amyris would expect to lose money on at least the first few production campaigns, with the hope that the manufacturing process would help it learn how to manufacture more efficiently. Alvarez explained this is what Amyris did for a recently introduced sugar substitute product. Of course, Amyris did not raise this approach during contract negotiations or the discussions for what milestones were appropriate—and it is *not* the approach that the Parties agreed upon in the RCL Agreement. Amyris apparently never had to explain this to a customer or partner before, because in its other partnerships, it had retained control over manufacturing. In contrast, under the RCL Agreement, Lavvan controlled that process and therefore needed information about manufacturing costs. Indeed, Lavvan learned the true costs of manufacturing as part of Lavvan’s direct involvement in

discussions with manufacturers concerning the details of the manufacturing costs and process and in negotiating the engineering study work with the Selected Manufacturer.<sup>7</sup>

179. When encouraging Lavvan to adopt Amyris’s costly “optimization on the fly” approach, Alvarez also explained how Amyris would work to *hide* this unprofitable decision. He suggested that if Lavvan began production with the Selected Manufacturer, Amyris could temporarily shift other production to the Selected Manufacturer, to artificially decrease the cost basis for the Selected Manufacturer’s work.

180. Amyris’ demands were even more troublesome, as they had not even shared with Lavvan the end-to-end process that they proposed to implement in a commercial facility, regardless of cost. For example, while the efficiency of the yeast strain was of course critical, so was the process for recovering and isolating the target cannabinoids from the fermentation tanks. Amyris had not shared with Lavvan their intended plans for this downstream processing, and was effectively demanding that Lavvan move forward blindly. Beyond the lack of a tested production process, and the fact that basic development was not far enough along for costs to be sufficiently low to commercialize, a number of problems with the quality of the cannabinoids that Amyris was producing needed to be addressed as well. For example, the cannabinoids that Amyris was producing contained byproducts that rendered those cannabinoids, in essence, unmarketable.

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<sup>7</sup> Amyris’s scheme to conceal its unprofitable production “campaigns” is beginning to attract attention. In March 2020, a watchful analyst examined Amyris’s 2019 fiscal results and concluded that “Amyris is spending way too much on manufacturing costs.” He observed that Amyris “hasn’t reported detailed operating results for its consumer brands” and “the more than doubling of production costs from 2018 to 2019 suggests investors don’t have all of the context.” In an update after Amyris announced its Q2 2020 results, the same analyst highlighted similar concerns, including a “worrisome accumulation of deferred-cost-of-product revenue.”

181. When Lavvan voiced its concerns about premature commercialization with products well below the agreed-upon specifications, Amyris again ignored the fundamental terms of the Lavvan-Amyris partnership and asserted that, with their other partnerships, Amyris retained the right to make decisions or to share in control of joint decisions regarding when to scale and go into production. Pressing further, Amyris COO Alvarez told Lavvan that Amyris was “ready to go ourselves if you feel that you cannot do it yourself” and was “very clear about what we can do ourselves to make sure that we move forward.” In other words, unless Lavvan agreed to give in to Amyris’s demands over the manufacturing timing and commercialization process, Amyris would manufacture and commercialize cannabinoids itself even though the cannabinoids remained at entirely uneconomic levels—without Lavvan, in breach of the RCL Agreement, and in violation of Lavvan’s intellectual property rights.

182. Amyris also revisited and shifted its position about Lavvan’s CBG samples that it had sent out to various third parties. At the start of the meeting, Amyris stated that no samples were sent out externally and Amyris only retained a small amount of CBG samples for its own analytics. As the meeting progressed, Amyris then allowed that it was “possible” that Amyris sent out some samples for third-party analytics. Before the meeting ended, Amyris backtracked again and re-confirmed that no samples were sent out externally, but that Amyris might have used some sample for its own uses beyond analytics.

183. And finally, with respect to THC, Amyris refused to move forward unless the RCL Agreement was amended to provide for additional milestones. In other words, even though Amyris had pressured Lavvan to tell Amyris’s auditors that Amyris was developing THC for Lavvan, Amyris was refusing, just one month later, to do any of that work.

184. Immediately after the meeting, Amyris COO Alvarez confirmed in an email to Lavvan that Amyris intended to move forward with commercializing cannabinoids with or without Lavvan: “we will continue to operate with the parameters of the RCLA *when we decide to move forward and produce ourselves, if you choose not to proceed at this time*” (emphasis added). Alvarez said he would provide Lavvan with the specific provisions of the RCL Agreement that Amyris contended would enable it to proceed without Lavvan—but he never did.

185. After receiving very brief meeting minutes from Amyris, given the critical importance of the issues and topics discussed, Lavvan circulated comprehensive revised minutes of the meeting to Amyris. On April 21, 2020, Amyris sent Lavvan proposed revisions to those minutes. These revisions were heavily biased in favor of Amyris and included numerous overt and subtle shifts in positions it represented during the meeting.

186. For example, Amyris once again shifted its position on what happened to the CBG samples. The original minutes (consistent with what was stated on the call) stated, “Amyris confirmed that no other CBG was or has been made, and none was sent externally to any *third party*.” Amyris revised that sentence to state: “Amyris confirmed that no other CBG was or has been made, and none was sent externally to any *customer*.” That is, Amyris was now admitting, once again, as Melo had done a few weeks prior, that Amyris *had* circulated samples. But rather than provide a full accounting of what happened to the CBG samples, Amyris was simply revising the minutes to reflect statements not made and vetted during the Joint Steering Committee meeting. Once again, Amyris’s shifting positions on what happened to the samples all lead to the conclusion that Amyris developed and distributed more CBG samples than previously disclosed.

187. Amyris also attempted to subtly shift its threat to walk away from the RCL Agreement unless Lavvan provided additional milestone payments. Lavvan's minutes reflected Amyris's position at the meeting that it could and would proceed without Lavvan: "Amyris expressed that they feel that they have the ability under the Agreement to proceed with commercialization without Lavvan's involvement and/or without Lavvan's consent; Lavvan firmly asserted that the Agreement does not provide Amyris with these rights as described." Though Amyris's edits confirm its position that it intended to breach the RCL Agreement and misappropriate Lavvan's intellectual property, it added language to try to soften its threat: "Amyris confirmed that they prefer to work with Lavvan to manufacture and commercialize cannabinoids in multiple markets, but also have the ability under the Agreement, to proceed with production without LAVVAN's involvement for certain markets; LAVVAN asserted that the Agreement does not provide Amyris with these rights."

188. Amyris also edited a clause regarding the exclusivity provisions in the agreement with the Selected Manufacturer in a way that reflected its intent to independently develop cannabinoids. Lavvan had written "LAVVAN has secured [the Selected Manufacturer] under a two-way exclusivity arrangement with respect to cannabinoids, as a result, Lavvan and Amyris should not be discussing fermentation production with any other CMOs." Amyris, instead, edited to say the Parties "should not be discussing fermentation production with any other CMOs *for Lavvan.*"

189. Lavvan's minutes also stated: "Amyris agreed to highlight the clauses in the Agreement that Amyris is relying upon for in order to reach their conclusion." Despite having clearly made that commitment at the meeting, Amyris's revisions struck the sentence.



**Q. Lavvan Notifies Amyris That Amyris Is in Breach of the RCL Agreement**

190. On April 22, 2020, with the unanimous approval of Lavvan's board, Lavvan CEO Closner sent a formal letter to Amyris General Counsel and Secretary Nicole Kelsey and Amyris CEO Melo, as well as each member of Amyris's Board of Directors with the subject "Amyris Contractual Breaches." Lavvan's April 22 letter summarized Amyris's "illegal, anti-competitive, untruthful and unethical behavior" in breach of the RCL Agreement and in violation of Lavvan's intellectual property rights. Lavvan demanded (i) full accounting, with supporting paperwork, of all CBG samples Amyris had produced; (ii) a description of any other uses for cannabinoids that Amyris has provided to others; (iii) written acknowledgment that Amyris has no commercial right to the cannabinoids or their progenies; and (iv) that third parties be prevented from commercializing cannabinoids using the yeast strains and IP that were created for Lavvan.

191. Lavvan also sought to understand why Amyris believed that it could, in violation of the RCL Agreement and Lavvan's intellectual property rights, commercialize cannabinoids without Lavvan. As described above, Amyris had taken that position on several occasions, including by referencing unspecified carveouts. Yet Amyris, despite being asked numerous times, had repeatedly refused to provide any clarification regarding its supposed right to commercialize cannabinoids developed for Lavvan but without Lavvan.

192. Instead, immediately after receiving Lavvan's April 22 letter, Amyris cancelled all regular and previously scheduled working sessions, calls, and other collaborative endeavors between Lavvan and Amyris. Amyris also ceased participating in meetings and discussions with Lavvan and the Selected Manufacturer, with a few minor exceptions. Amyris effectively walked away from the deal.

193. Melo's response letter on April 24 dodged nearly every issue and demand. Rather than substantively address Amyris's attempt to re-write history in its revisions to the Joint

Steering Committee minutes, Melo tried to downplay Amyris's distortional revisions as a mere difference in "perspective."

194. Regarding Amyris's continued delays, Amyris faulted Lavvan for "referencing a commercially unavailable product specification" that it had agreed to in Amendment No. 2 *just one month prior*. Amyris believed these specifications "represent a disconnect from current market reality" that forced Amyris "to avail itself of other opportunities to progress its cannabinoid science."

195. Rather than addressing the RCL Agreement's [REDACTED], [REDACTED], Melo provided an incoherently mealy-mouthed and incorrect (to the extent it is decipherable) response:

Amyris's right to proceed with the development of cannabinoids is permitted under the RCLA and the exclusions to the [REDACTED], not only in accordance with that definition, but as explicitly excepted from the [REDACTED] throughout the RCLA. Lavvan's exclusive license to Amyris's technology and relevant IP is only for the [REDACTED]. By definition, the scope of such exclusivity does not reach the markets excluded from such definition.

196. Melo's focus on the definition of the term "[REDACTED]" is a red herring: the RCL Agreement states that "[REDACTED] [REDACTED]. That restriction is not limited to the "[REDACTED]" Moreover, the [REDACTED] [REDACTED] Even that limited exception, moreover, is only temporary: [REDACTED] [REDACTED] That is, once Amyris's pre-existing contractual restrictions with [REDACTED]

[REDACTED]

[REDACTED]

197. Melo also went on the offensive in his April 24 letter, claiming that Lavvan had breached the RCL Agreement by failing to provide confirmation of its ability to pay for milestone payments that Amyris has been incapable of meeting—even though no provision requires such confirmation. Melo also complained about Amyris’s lack of a role in manufacturing, even though Amyris has been regularly and materially involved and included in discussions with prospective contract manufacturing organizations as well as the selection of the Selected Manufacturer, and even though ultimate control over manufacturing rested with Lavvan, not Amyris.

198. Melo said nothing about the samples Amyris provided to third parties. Nor did he deny Amyris’s intent to move forward with commercialization without Lavvan.

199. Amyris’s actions only days later confirmed its intent to move forward without Lavvan, in breach of the RCL Agreement, and in violation of Lavvan’s intellectual property rights. On May 8, 2020, during its first-quarter earnings call, Amyris COO Alvarez confirmed that Amyris had “secured production capacity for our first two cannabinoid products in 2020.” Amyris had not shared this information with Lavvan.

200. On May 11, 2020, having received no comfort on the issues identified in his April 22 letter, but instead receiving stark confirmation of his grounds for concern, Closner took the difficult step of providing Amyris written notice of Lavvan’s intent to terminate the RCL Agreement. In identifying Amyris’s material breaches, Closner again highlighted that Amyris had (i) provided sample product to third parties; (ii) expressed intent to commercialize without Lavvan; (iii) made inaccurate public statements [REDACTED]

[REDACTED]; and (iv) demanded uncalled-for milestone payments. Closner also invoked Lavvan's rights to recover for Amyris's public misrepresentation on May 8, 2020, regarding Amyris's intent to secure production.

201. Over a month later, on June 17, 2020, Melo responded. Telling Closner that "Lavvan should take Amyris at its word" that no breach had occurred, he continued to refuse to respond to Lavvan's April 22 demands. Rather than providing a full accounting backed by paperwork, Melo provided a new explanation for the genesis of the sample sent to Lavvan without any attempt to reconcile his past statements that Amyris sent samples to third parties. Melo also did not even attempt to reconcile his plan to have Amyris commercialize cannabinoids on its own with the RCL Agreement's prohibition against such conduct or with Lavvan's exclusive licenses to Amyris's IP.

#### **R. At All Times, Lavvan Took Reasonable Efforts to Protect Its Trade Secrets**

202. Lavvan took security very seriously. As a new venture, Lavvan understood that its intellectual property in this cutting-edge space was one of its largest assets.

203. Lavvan implemented enhanced security measures to access its system, including requiring computers to be encrypted.

204. Lavvan also segregated sensitive files, including high-level business documents and research and development, from employees' general access.

205. All Lavvan employees, consultants, and contractors, and anyone else who accessed Lavvan's intellectual property, were required to sign non-disclosure agreements.

#### **S. Amyris Confirms It Is Commercializing Cannabinoids Without Lavvan, Violating Lavvan's Trade Secrets and Patents**

206. On August 6, 2020, Amyris announced its Q2 2020 financial results and held an earnings call. During the call, Amyris COO Alvarez confirmed that Amyris was beginning

fermentation of a cannabinoid within two weeks and would deliver cannabinoids “at scale” in the second half of 2020. Amyris CEO Melo similarly described production as occurring “within the next couple of weeks.” In direct response to a question about whether this would be done for Lavvan, Melo stated that Amyris was developing these cannabinoids in the “market area excluded” from the RCL Agreement.

207. Based on the representation that Amyris would be “the largest producer of that particular cannabinoid in the” United States, and based on Amyris’s September 1, 2020, press release (described below), Amyris was referring to CBG. The fact that Amyris’s announcement centered around CBG shows how it relied on Lavvan’s expertise to target a relatively unknown cannabinoid that Lavvan identified as having potentially significant commercial value.

208. Amyris’s statements are troubling, not only because Amyris confirms that it will be violating Lavvan’s patents and misusing its trade secrets and resources to secure a wrongful first-to-market position, but also because it appears Amyris is withholding information about its progress in the development of cannabinoids that are core to the Parties’ partnership. Amyris has not shared with Lavvan a completed production process and related IP needed for commercialization, but Amyris has now told the market that it has completed development and is imminently moving forward for its own benefit. Specifically, Amyris had represented to Lavvan that Amyris had stopped pursuing CBG development simultaneously with CBD, and that significant unknowns remained around the final product processing steps. Amyris further represented that it stopped working on CBG because Lavvan wouldn’t acquiesce to Amyris’s demands for additional, uncalled-for payments that had previously been demanded.

209. Indeed, in a press release issued on September 1, 2020, Amyris reiterated its plan. It stated that “it has successfully scaled up the commercial production of Cannabigerol (CBG)

leveraging its industrial fermentation process capability,” and that it “expects to deliver about one ton of high purity CBG through fermentation as an alternative to the traditional production method of extraction from the *Cannabis sativa* L. plant.” Amyris further explained that the “[f]irst commercial revenue from the sale of this molecule is anticipated this year as an ingredient in applications that are excluded from Amyris’s current collaboration agreements.”

210. But any such revenue cannot be for an “application that [is] excluded” from Amyris’s agreement with Lavvan. Indeed, the “[REDACTED]”—the area over which Lavvan has an exclusive license under the RCL Agreement—includes “[REDACTED],” and, as explained above, Amyris has no right to operate in the [REDACTED] (which is, in any event, extremely narrow). Moreover, the RCL Agreement expressly prohibits Amyris from using the intellectual property licensed to Lavvan for [REDACTED]. [REDACTED] Lavvan has not consented to such use.

211. In other words, in its press release, Amyris confirmed that it was pursuing production of CBG, a commercial opportunity identified by Lavvan, without Lavvan, and that it would be using intellectual property licensed to Lavvan to further that goal. Moreover, Amyris highlighted CBG’s tremendous commercial potential: “CBG is a non-psychoactive cannabinoid and presents significant therapeutic potential, making it a subject of great interest for researchers and consumers alike.”

212. Naturally, Amyris did not credit Lavvan with identifying CBG’s commercial potential, nor did it disclose that, by producing CBG without Lavvan, it would be violating Lavvan’s intellectual property rights. To add insult to injury, Amyris stated, “CBG is the precursor from which all other cannabinoids are synthesized *and is often referred to as the ‘stem*

*cell’ of cannabinoids.”* This was the precise terminology Lavvan CEO Closner used in describing CBG to Amyris.

213. Thus, after accepting millions in payments from Lavvan, taking Lavvan’s ideas, and using intellectual property exclusively licensed to Lavvan for its own benefit, Amyris has explained to the public markets—using language taken directly out of the mouth of Lavvan’s CEO—that Amyris will be commercializing CBG without Lavvan.

214. Predictably, the markets reacted positively to Amyris’s news. By the end of the day, Amyris’s stock had increased 4% from the previous day’s closing price. This increase occurred on the first day after Amyris’s private placement from June 2020 on which Amyris was permitted to, in its own words, “issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock.”

#### **T. Amyris Also Misused the Trade Secrets It Exclusively Licensed to Lavvan**

215. As described above in Section V.C, Lavvan secured from Amyris and the SPE an *exclusive* license to the relevant IP, including trade secrets, for the development of cannabinoids. As the exclusive licensee, Lavvan must take steps to protect these trade secrets.

216. On information and belief, Amyris has created the following new trade secrets, or modified and extended existing trade secrets, for the purposes of developing and commercializing cannabinoids:

a.

[REDACTED]

[REDACTED]

[REDACTED].

b.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

d. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

e. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

f. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

g. [REDACTED]

[REDACTED]

[REDACTED]



h.

[REDACTED]

i.

[REDACTED]

217. On information and belief, Amyris has also developed additional trade secrets for producing cannabinoids, and those trade secrets are exclusively licensed to Lavvan under the RCL Agreement. Discovery is required to identify these trade secrets Amyris developed for cannabinoids as a result of Lavvan's investment.

218. These trade secrets are not generally known and have independent economic value. They are the result of Amyris's research and iterative manufacturing process, and all permit the production of better and more cost-effective yeast strains that produce cannabinoids. Amyris has identified these processes as trade secrets and has represented that it protects them as trade secrets.

219. On information and belief, Amyris is necessarily misappropriating these trade secrets in its attempts to commercialize cannabinoids consistent with their August and September 2020 announcements that they were proceeding with commercialization without Lavvan.

220. In addition to the protections described above for its own trade secrets, Lavvan abided by [REDACTED]

[REDACTED].

## **VI. DAMAGES**

221. Amyris's conduct has caused Lavvan substantial damages. The specific quantum of damages will be proven at trial, but Lavvan is entitled to no less than \$881 million, which

represents the sum of a discounted cash flow of Lavvan's expected future profits as described below (but excluding milestone payments owed to Amyris). This figure is especially conservative because it does not include Amyris's obligations under federal law to pay double and/or treble damages for willfully violating Lavvan's intellectual property rights.

222. **Lost Profits.** In the absence of Amyris's misconduct, Lavvan would have been among the first (if not the first) to market in commercializing and selling biosynthetic cannabinoids in various fields. This would have resulted in significant revenue, including in the near term, as Amyris itself publicly touted multiple times. For example, during its November 7, 2019, earnings call, Amyris CEO John Melo publicly projected that Amyris would earn \$70 million in milestone payments in 2020, corresponding to the anticipated successful commercialization of at least one cannabinoid in a volume greater than 100,000 liters during 2020. As Amyris is aware due to its involvement in the negotiations, Lavvan had negotiated and was set to utilize two fermentation tanks (60 cubic meters each) at the Selected Manufacturer to commercialize cannabinoids based on Amyris's stated progress. One year's worth of CBG in those two tanks would have produced 11,950 kg of pure CBG. At a market price of \$5,400 per kilogram, that would have resulted in \$64.5 million in revenue. And one year's worth of CBD production in those two tanks would have produced 17,190 kg of pure CBD. Even at a lower market price of \$1,000 per kilogram, Lavvan still would have earned \$17.2 million in revenue. And these projected CBD and CBG revenue figures are from just those first two fermenters *alone*. The Selected Manufacturer was selected, in part, because of its ability to scale quickly with additional tanks in significantly larger sizes.

223. Amyris, of course, is also aware of this opportunity, which is why it has shunned the Parties' Agreement and its milestone payments in favor of capturing the full revenue upside

described above that rightfully belongs to Lavvan. As described previously, during its August 6, 2020, earnings call and September 1, 2020, press release, Amyris publicly represented that it is beginning to manufacture and commercialize one cannabinoid.

224. Moreover, Lavvan's projections from January 2020 confirm that Lavvan expected to reap significant profits from commercialization pursuant to the RCL Agreement. Lavvan projected that it would net (after operating expenses, capital expenditures, royalty payments, milestone payments, and other costs) \$43.5 million in 2021, \$146.6 million in 2022, \$206.1 million in 2023, and \$451.9 million in 2024.

225. **Disgorgement.** Amyris is commercializing cannabinoids and has promised to scale them in the near future. All revenue that Amyris receives from such efforts should be disgorged to Lavvan. Additionally, Amyris should also disgorge the benefits to its business obtained as a consequence of its partnership with Lavvan, including as a result of Lavvan's industry knowledge and insights that Lavvan shared with Amyris under the RCL Agreement.

226. **Reasonable Royalty.** In no event should Lavvan's damages be less than a reasonable royalty of the fair market value of a license that Amyris would have purchased from Lavvan.

## VII. CAUSES OF ACTION

### COUNT ONE – TRADE SECRET MISAPPROPRIATION UNDER THE DEFEND TRADE SECRETS ACT

227. Lavvan incorporates the allegations above and further alleges as follows:

228. Lavvan is the owner or licensee of valuable trade secrets related to products and services used in, or intended for use in, interstate or foreign commerce. Such trade secrets comprise Lavvan's financial, business, scientific, technical, economic and engineering information, including but not limited to, compilations, program devices, formulas, designs,

prototypes, methods, techniques, processes, procedures, programs and codes, both tangible and intangible and stored, compiled and memorialized physically, electronically, and graphically. The trade secrets also include those developed or improved by Amyris for the production of cannabinoid-producing yeast strains as part of the collaboration and licensed to Lavvan.

229. Lavvan has taken reasonable measures to keep such information secret.

230. Lavvan's trade secrets derive independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information. Amyris's trade secrets which are licensed to Lavvan similarly derive independent economic value for the same reason.

231. Amyris disclosed and/or used Lavvan's trade secrets without Lavvan's express or implied consent. Amyris used improper means to acquire knowledge of the trade secrets by failing to abide by the RCL Agreement's confidentiality and other provisions. Amyris also used the trade secrets licensed to Lavvan without Lavvan's express or implied consent.

232. Amyris knew or had reason to know at the time of disclosure or use that its knowledge of the trade secrets was derived from or through Lavvan and that Amyris used improper means to acquire the trade secrets. Amyris acquired the trade secrets under circumstances giving rise to a duty to maintain the secrecy of the trade secrets or limit the use of the trade secrets. Amyris owed a duty to Lavvan to maintain the secrecy of its trade secrets or limit use thereof.

233. Amyris's improper means in disclosing Lavvan's trade secrets include Amyris's misrepresentations and breach of a duty to maintain secrecy of the trade secrets.

234. Amyris, with intent to convert trade secrets that are related to a product or service used or intended for use in interstate or foreign commerce to the economic benefit of Lavvan, and intended or knowing that the offense will injure Lavvan, knowingly did the following:

- a. stole, or without authorization, removed, concealed, or by fraud, artifice, or deception obtained such information;
- b. without authorization copied, duplicated, sketched, photographed, downloaded, uploaded, altered, destroyed, photocopied, replicated, transmitted, delivered, sent, mailed, communicated, or conveyed such information;
- c. received or possessed such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;
- d. attempted to commit any offense described in paragraphs (a) through (c); or
- e. conspired with one or more other persons to commit any offense described in paragraphs (a) through (c), and one or more of such persons performed an act to effect the object of the conspiracy.

235. Amyris continues to misappropriate Lavvan's proprietary information through its commercialization efforts. As a result of such misappropriation, Lavvan has suffered damages in an amount to be determined at trial.

**COUNT TWO – PATENT INFRINGEMENT (35 U.S.C. § 271(a))**

236. Lavvan incorporates the allegations above and further alleges as follows:

237. Amyris and Lavvan signed and executed the Research, Collaboration and License Agreement dated March 18, 2019. Amyris and Lavvan entered Amendment No. 1 thereto as of May 20, 2019 and Amendment No. 2 thereto as of March 11, 2020.

238. Pursuant to [REDACTED]

[REDACTED]

[REDACTED]

239. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

240. The “[REDACTED]” and “[REDACTED]” licensed to Lavvan includes a number of valid and enforceable patents (the “Patents”), including (but not limited to) the following:

- a. Patents relating to Biochemical Pathways and that are Owned by Amyris (the “Pathway Patents”):
  - i. *Patent No. 8,415,136*, issued April 9, 2013. This patent concerns the formation of Acetyl-CoA, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a genetically modified yeast cell capable of producing an isoprenoid, including acetoacetyl-CoA, and method for using the yeast cell to produce an isoprenoid.<sup>8</sup>
  - ii. *Patent No. 8,603,800*, issued December 10, 2013. This patent concerns the formation of Acetyl-CoA, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a genetically modified yeast cell capable of producing an isoprenoid, including acetoacetyl-CoA, and method for using the yeast cell to produce an isoprenoid.

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<sup>8</sup> Cannabinoids are isoprenoids.

- iii. *Patent No. 8,859,261*, issued October 10, 2014. This patent concerns the formation of Acetyl-CoA, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a genetically modified yeast cell capable of producing an isoprenoid, including acetoacetyl-CoA, and method for using the yeast cell to produce an isoprenoid.
- iv. *Patent No. 9,914,941*, issued March 13, 2018. This patent concerns the formation of Acetyl-CoA, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a genetically modified yeast cell capable of producing an isoprenoid, including acetoacetyl-CoA, and method for using the yeast cell to produce an isoprenoid.
- v. *Patent No. 9,410,214*, issued August 9, 2016. This patent concerns the formation of Acetyl-CoA, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a genetically modified yeast cell capable of producing an isoprenoid, including acetoacetyl-CoA, and method for using the yeast cell to produce an isoprenoid. This patent further includes a method for increasing the production of acetyl-CoA or an acetyl-CoA derived compound in a yeast cell.
- vi. *Patent No. 7,172,886*, which was issued February 6, 2007. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular,

this patent concerns a method for producing an isoprenoid, and a method for making isopentenyl pyrophosphate as used in the production of isoprenoids.

- vii. *Patent No. 7,667,017*, which was issued February 23, 2010. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns nucleic acid sequences for enzymes in the pathway for forming, *inter alia*, isopentenyl pyrophosphate.
- viii. *Patent No. 7,622,282*, which was issued November 24, 2014. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a method for forming, *inter alia*, isopentenyl pyrophosphate.
- ix. *Patent No. 7,736,882*, which was issued June 15, 2010. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a host cell transformed to produce, *inter alia*, isopentenyl pyrophosphate.

b. Patents relating to Biochemical Pathways and in which Amyris has an Ownership Interest (the “Additional Pathway Patents”):

- i. *Patent No. 7,915,026*, which was issued March 29, 2011. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular,



this patent concerns a host cell transformed to produce, *inter alia*, isopentenyl pyrophosphate.

- ii. *Patent No. 8,288,147*, which was issued October 16, 2012. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a host cell transformed to produce, *inter alia*, isopentenyl pyrophosphate.
- iii. *Patent No. 7,183,089*, which was issued February 27, 2007. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a method for forming, *inter alia*, isopentenyl pyrophosphate.
- iv. *Patent No. 7,670,825*, which was issued March 2, 2010. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a host cell transformed to produce, *inter alia*, isopentenyl pyrophosphate.
- v. *Patent No. 7,129,392*, which was issued on October 31, 2006. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a method for producing genetically transformed cells, which can be used to produce isoprenoids, including isopentenyl diphosphate and dimethylallyl diphosphate.

- vi. *Patent No. 8,999,682*, which was issued on April 7, 2015. This patent concerns the formation of isopentenyl pyrophosphate, which is a necessary step for the production of cannabinoids from yeast strains. In particular, this patent concerns a genetically transformed cell capable of increased isoprenoid production.
- c. Patents relating to Fermentation and that are Owned by Amyris (the “Fermentation Patents”):
  - i. *Patent No. 7,659,097*, which was issued February 9, 2010. This patent concerns the production of isoprenoids through fermentation.
  - ii. *Patent No. 9,200,296*, which was issued December 1, 2015. This patent concerns the production of isoprenoids through fermentation.
  - iii. *Patent No. 10,106,822*, which was issued October 23, 2018. This patent concerns the production of isoprenoids through fermentation.
  - iv. *Patent No. 9,765,363*, which was issued September 19, 2017. This patent concerns the production of isoprenoids through fermentation.
  - v. *Patent No. 9,670,518*, which was issued June 6, 2017. This patent concerns the production of isoprenoids through fermentation.

241. Pursuant to federal patent law, “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.” 35 U.S.C. § 271(a).

242. Amyris has violated this provision with respect to the Patents. Indeed, notwithstanding Lavvan's exclusive license to the Patents (even as to Amyris), Amyris has used the Patents to develop, manufacture, and commercialize cannabinoids in the [REDACTED].

243. Amyris has refused to provide Lavvan with adequate information concerning which patented technology it uses to develop and manufacture cannabinoids, even though Lavvan requested such information no later than December 2019, and even though such technology was licensed exclusively to Lavvan. Nevertheless, based on the information that Lavvan has obtained regarding Amyris's patents and based on Lavvan's knowledge regarding the process by which cannabinoids are developed and manufactured, Amyris necessarily uses, and therefore infringes, some or all of the Patents in the course of developing and manufacturing cannabinoids.

244. More specifically, Amyris has infringed the Patents, in violation of 35 U.S.C. § 271(a), in at least the following ways:

- a. *Developing Cannabinoids.* As explained above, Amyris is developing cannabinoids to commercialize on its own behalf. To produce cannabinoids, it is necessary to first produce a number of other molecules, including Acetyl-CoA, and isoprenoid precursors, including isopentenyl pyrophosphate and geranyl pyrophosphate. The Pathway Patents and Additional Pathway Patents include claims covering the production of such molecules and precursors and, thus, may be used to produce cannabinoids. On information and belief, Amyris is currently using, or will imminently use, some or all of the Pathway Patents and Additional Pathway Patents to develop and produce cannabinoids from yeast strains. Indeed, in its September 1, 2020 press release, Amyris COO Alvarez confirmed that

Amyris had developed cannabinoids by using its “biotechnology platform” to “engineer yeast.”

- b. *Producing Cannabinoids Through Fermentation.* As explained above, Amyris is developing cannabinoids to commercialize on its own behalf and has begun or soon will begin manufacturing those cannabinoids at scale. Amyris has stated that it will use a fermentation process to produce those cannabinoids. The Fermentation Patents include claims covering the production of isoprenoids, including cannabinoids, through fermentation. Thus, in producing cannabinoids through fermentation, on information and belief, Amyris is currently using, or will imminently use, some or all of the Fermentation Patents.

245. Amyris’s infringement was, and is, willful. As the owner of the Patents, Amyris necessarily knew of their existence, and knew that it was infringing those Patents—which were exclusively licensed to Lavvan (even as to Amyris)—by developing, manufacturing, and commercializing cannabinoids.

246. Lavvan has standing to sue for patent infringement under federal patent law, because it is an exclusive licensee and the Pathway Patents and Fermentation Patents at issue are owned by Amyris. Providing Lavvan standing to sue in its own name is thus necessary to prevent an absolute failure of justice. With respect to the Additional Pathway Patents, Lavvan intends to rely on discovery to establish that Amyris’s interests in those patents enabled Amyris to provide Lavvan with an exclusive license.

247. As a result of Amyris’s infringement of the Patents, Lavvan has suffered damages in an amount to be determined at trial. Because Amyris’s infringement of the Patents is and was willful, Lavvan is entitled to enhanced damages pursuant to 35 U.S.C. § 284. Likewise, Amyris’s

egregious misconduct, as described above, renders this case “exceptional” for purposes of 35 U.S.C. § 285. Consequently, Lavvan is entitled to “reasonable attorney fees.”

248. Amyris’s infringement can irreparably harm Lavvan, such that monetary damages alone are inadequate to redress such harm. Such irreparable harm includes loss of goodwill, harm to Lavvan’s reputation, and loss of business opportunities, including the loss of an opportunity to be first to market. Accordingly, Lavvan is entitled to injunctive relief pursuant to 35 U.S.C. § 283.

### **PRAYER FOR RELIEF**

WHEREFORE, Lavvan respectfully prays for relief as follows:

- a. A judgment that Amyris misappropriated Lavvan's trade secrets as alleged herein.
- b. A judgment that Amyris infringed Lavvan's patents as alleged herein.
- c. Damages, including treble damages, assessed against Amyris pursuant to the Defend Trade Secrets Act of 2016, 18 U.S.C. § 1831 et seq.
- d. Damages assessed against Amyris for misappropriating trade secrets, including compensatory damages, unjust enrichment, or restitution damages and reasonable royalty damages.
- e. Imposition of a constructive trust for the benefit of Lavvan as a vehicle for disgorgement of all monies, profits and gains Amyris have obtained or will unjustly obtain in the future at the expense of Lavvan.
- f. A grant of a permanent injunction to eliminate the unfair advantage Amyris gained by using Lavvan's trade secrets and other intellectual property.
- g. Punitive damages for Amyris's willful and wanton misappropriation and the tortious conduct described above.
- h. Exemplary damages pursuant to the Defend Trade Secrets Act for Amyris's willful and malicious conduct.
- i. Enhanced damages for Amyris's willful patent infringement pursuant to 35 U.S.C. § 284.
- j. Expenses, costs, and attorneys' fees.
- k. Such other and further relief as the Court deems just and proper.

### **JURY TRIAL DEMAND**

Lavvan demands a trial by jury for all claims.

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